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REGULATIONS
AND
COURSES OF STUDY
OF THE
High Schools and Collegiate Institutes
OF THE
PROVINCE OF ONTARIO

AMENDED AND CONSOLIDATED
1911

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

ONTARIO
DEPARTMENT OF EDUCATION

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High School Regulations and Courses of Study

†ADMISSION TO THE HIGH SCHOOLS

NOTE.—In these Regulations, Department means the Department of Education; Minister, the Minister of Education; and Regulations, the Regulations of the Department of Education. Except where otherwise evident, the term High School includes Collegiate Institute, and the term Board includes High School and Collegiate Institute Boards and Boards of Education.

1. Subject to the Regulations hereinafter contained, candidates may be admitted to either the Lower School of the High Schools on passing the Junior High School Entrance Examination, or to the Middle School on passing the Senior High School Entrance Examination.

JUNIOR HIGH SCHOOL ENTRANCE EXAMINATION

SUBJECTS AND EXAMINATION PAPERS

2.—(1) Candidates for admission to the Lower School shall have completed the courses in the following subjects as prescribed for Form IV of the Public Schools:

Group I.—Literature, History, Art, Physiology and Hygiene, and Nature Study.

Group II.—Reading, Writing, Spelling, Geography, Grammar, Composition, and Arithmetic and Mensuration.

(2) The Literature of Group I shall embrace the careful reading during the previous year of at least four suitable works in English Literature (at least two of which shall have been read in class), selected by the Principal for each pupil from a list prescribed by the Minister.

NOTE.—The works in English Literature shall be provided in the school library or bought by the pupils, as the Board of Trustees may direct.

(3) The candidate shall also have memorized the list of selections prescribed by the Minister.

(4) The examination in Reading shall be both written and oral. The examination paper shall be based on sight passages, and shall be designed as a test of the candidate's ability to understand what he reads. The candidate's knowledge of the selections for memorization shall also be tested on this paper.

GROUP I

3.—(1) (*a*) Except as provided in (2) and (4) below there shall be no examination in the subjects of Group I.

---

†Under sections 44 to 47 of the High Schools Act will be found the general provisions for the admission of candidates and the establishment, organization, and maintenance of Boards of High School Entrance Examiners.

(*b*) Except as provided in (4) and 7 below, no candidate shall be admitted to the examination in the subjects in Group II, who does not present a certificate from the Principal of the Public, Separate, or Normal Model School in which he has been prepared and which has been approved by the Inspector, as provided in (3) (*b*) below, that he has passed a final examination, and has completed satisfactorily, the courses in the subjects of Group I. In the case of a candidate who writes at a centre outside of the inspectorate in which is situated the school at which he has been prepared, the certificate of the Principal shall not be accepted unless endorsed by the Inspector of said School.

(2) If, on the report of a High School Principal, the Entrance Board decides that the pupils of any Public, Separate, or Normal Model School are not adequately prepared in the subjects of Group I, the Board shall itself subject the pupils coming thereafter from such school to an examination in the subjects of the Group, or in any subjects thereof, it may deem necessary.

NOTE.—In view of the complaints that in some schools the subjects of Group I are insufficiently attended to, it is the duty of the Entrance Board to put in force, when necessary, the provisions of the foregoing Regulation.

(3) (*a*) At his official visits to each school in his inspectorate, and thereafter as he may deem it expedient, the Public or the Separate School Inspector, as the case may be, shall make special inquiry and report as to whether the subjects of Group I are being efficiently taken up. Before deciding as to the approval or non-approval of a school, he shall also require the Principal to forward a certified copy of the time-table in use since his last visit, with copies of at least the final school examination papers in the subjects of Group I, and any other records or particulars he may desire.

(*b*) In the case of his non-approval of the course in Group I, the Inspector shall notify the Principal to this effect not later than June 15th; otherwise, the Principal may assume the Inspector's approval.

NOTE 1.—One of the matters upon which the Inspector should report specially to each School Board is the adequacy of the provision made at the date of his visit for teaching the subjects of Group I. As much of this report as he may deem necessary, he should communicate to the teacher also, with any necessary suggestions and directions.

(4) When an applicant has not been prepared in a Public, Separate, or Normal Model School, the Public School Inspector shall report the circumstances to the High School Entrance Board, which, before the examination begins, shall deal with such case as it may deem expedient.

GROUP II

(*a*) *Admission Without Examination*

4.—(1) On its own motion or at the request of a Board of Education or a High School Board, an Entrance Board, after such inquiry as it may deem necessary as to the character of the teaching, organization, and management, may substitute for the prescribed entrance examination, promotion on the certificate of the Principal of the Public, Separate, or Normal Model Schools, that such candidates have completed satisfactorily the courses prescribed in the subjects of Group II; but pupils of a Form not so admitted may take the uniform examination as herein prescribed.

NOTE.—This Regulation provides for a system of promoting all the pupils of a Form whom the Principal can recommend. It does not provide for isolated cases.

(2) The Principal's certificate for Group I shall be subject to the order of the Entrance Board after June 15th.

(3) The Principal of a High School may accept, for admission to the Lower School, a Junior Public School Graduation Diploma in lieu of a Junior High School Entrance certificate. Pupils so admitted shall be placed in the Form of the Lower School for which the Principal regards them as competent.

(4) The Principal of a High School may admit into such Form as he may deem it expedient a pupil who has been duly admitted and has been in attendance at a Continuation School or another High School.

(*b*) *Admission on Examination*

5.—(1) A uniform examination in the subjects of Group II shall be held annually, as prescribed herein, at the centres provided for in the High Schools Act.

(2) The examination papers shall be prepared by a Provincial Board of Examiners appointed by the Minister and selected from the Inspectors and Principals of the Public, Separate, Continuation, and High Schools.

(3) A report from the Principal as to the standing of his candidates in the subjects of Group II., may be sent to the Public School Inspector for the consideration of the Entrance Board in connection with the examination results.

(4) The answer papers shall be valued and the results reported to the Minister by the Entrance Board.

(5) If the members of an Entrance Board are themselves unable to overtake the work of examining the papers within the time specified, they shall appoint examiners [see High Schools Act, section 46 (3)] to assist them, so that the returns may not be delayed. No one shall be permitted to act as examiner of the answer papers except the examiners appointed under the Act.

6.—(1) The marks for the subjects of Group II shall be apportioned as follows:

Reading (oral), Writing, Spelling, each 50;
Reading (examination paper), Grammar, Composition, Geography, and Arithmetic and Mensuration, each 100.

Two marks shall be deducted for each mis-spelled word in the Spelling paper, and reasonable deductions shall be made for mis-spelling in the other papers. Deductions shall also be made for lack of neatness.

(2) (*a*) A candidate who obtains 40 per cent. of the marks in each subject and 60 per cent. of the aggregate marks shall be entitled to pass standing.

(*b*) When a candidate is near the passing mark, the examiners shall re-read as many of his answer papers as may be necessary to determine the question of his fitness to take up High School work.

(*c*) The examiners may recommend to the Minister for pass standing a candidate who has not made a bad failure in any subject and who has made a high aggregate above the total required.

(*d*) The Chairman may also submit a case to the Board for reconsideration on the complaint of any candidate or any other person with regard to the examination.

(3) Subject to the Minister's approval the decision of an Entrance Board shall be final with regard to the admission or rejection of any candidate.

SPECIAL CASES

7. In Groups I and II an Entrance Board may recommend to the Minister, for admission, candidates whose cases deserve special consideration, on account, for example, of age, illness before or during the examination, or other unavoidable cause of absence from all or part of the examination, and who, in its judgment, are able to take up the work of the High School; but this provision shall not apply to a candidate at a centre outside of the inspectorate in one of the Public or the Separate Schools of which he has been prepared, who does not present the certificate of competency in Group I prescribed in 3 (1) (*b*) above.

PROVISIONAL ADMISSION

8.—(1) In the interval between examinations, a pupil who has been prepared on a different course in another Province or Country may be admitted provisionally to a High School by the Principal, with the concurrence of the Public School Inspector, if in their judgment he is able to take up the work of the High School.

(2) A report showing the age and attainments of such pupil, with the reasons for his admission, and signed by the High School Principal and Public School Inspector, shall be submitted to the Entrance Board at its next meeting. The Board shall then dispose of the case, and include the name of the pupil, if finally admitted, in its report to the Minister at the next annual examination, with a statement of the grounds for such admission.

CERTIFICATES

9. Except as provided in 11 (3) (*b*) below, each candidate admitted to a High School shall be entitled to a certificate signed by the Chairman and the Secretary of the Entrance Board.

PRESIDING OFFICERS

10.—(1) At each centre there shall be a chief presiding officer and such assistant presiding officers as may be required under (2) below. The chief presiding officer shall have the general oversight of the examination and the custody of the question papers and the answers, and both he and the assistant presiding officers shall be responsible to the Minister for the proper performance of their duties.

(2) The number of candidates under each presiding officer shall not exceed forty.

(3) The Principal of the High School shall be the chief presiding officer at his own school, and the Inspector may be the chief presiding officer at any other centre he may select.

(4) The other chief presiding officers shall be appointed, as the case may be, by the Public School Inspector or senior Public School Inspector, of the Inspectorate in which the centre is situated, and the assistant presiding officers by the Entrance Board.

(5) No presiding officer shall preside over his own pupils.

ORGANIZATION OF THE BOARD

11.—(1) Except for special reasons approved by the Minister, no Entrance Board shall consist of fewer than three members.

(2) (*a*) The High School Principal or the Senior High School Principal, as the case may be, shall be chairman of an Entrance Board on which there are one or more High School Principals.

(*b*) The Inspector or the Senior Inspector, as the case may be, shall be Chairman of an Entrance Board on which there is no High School Principal.

(3) (*a*) The Entrance Board shall appoint annually one of its members as Secretary. The Secretary shall keep the minutes of the Board, record the results, forward the prescribed reports to the Minister, issue the certificates to the successful candidates, and their marks to the unsuccessful candidates.

(*b*) In an inspectorate in a territory without county organization, where there is no High School, the Inspector shall perform the duties of Secretary, and shall sign the certificates as Chairman.

PAYMENT FOR INCIDENTALS

12. The School Board at each centre, whether in a County or a territory without county organization, shall pay the cost of the stationery and any other necessary supplies and all other incidental expenses.

CANDIDATES' FEES

13. As provided in section 46, subsection (5) of the High Schools Act, where candidates are charged fees such fees shall be collected by the chief presiding officer at each centre before the close of the first day of the examination, and shall be paid over at or before the close of the written examination, to the Treasurer of the County or of the High School Board, as the case may be.

REMUNERATION OF BOARDS AND PRESIDING OFFICERS

14.—(1) Each chief presiding officer shall be paid at the rate of $5.00 a day, and each assistant presiding officer at the rate of $4.00 a day, for presiding at and conducting the examination in accordance with the instructions of the Department.

(2) A presiding officer, appointed to a centre other than one at his place of residence, shall be allowed the usual cost of conveyance for one return trip between his place of residence and the centre at which he presides.

(3) An examiner whose place of residence is not at the centre where the meetings of the Entrance Board are held, shall be allowed for each meeting of the Board, the usual cost of conveyance for one return trip between the centre and his place of residence.

(4) Except with the consent of the High School Board or the County Council or the Minister, as the case may be, the allowance for conveyance, provided in (2) and (3) immediately preceding, shall not exceed $3.00.

(5) The examiners shall be paid at the rate of 75c. a candidate for reading the answer papers; and the Secretary, at the rate of 7c. a candidate.

(6) All payments under this regulation shall be made, on the requisition of the Chairman, as provided in section 46, subsection (4), and section 47, subsection (3) of the High Schools Act; but no payment shall be made until the Minister has approved of the Entrance Board's report of the examination.

(7) In any case where the regulations for the Entrance examination have not been duly observed, the Minister may order the withholding of the fees of the presiding officer or the examiner concerned.

NOTIFICATION BY CANDIDATES

15. Each candidate shall notify the Public School Inspector concerned before April 20th, of the examination centre at which he purposes writing.

REPORTS TO MINISTER

16.—(1) The Inspector shall report to the Minister not later than the 24th day of April in each year the number of candidates for examination at each centre within his inspectorate.

(2) The Entrance Board shall submit a report in two sections, the first giving the names of candidates who have obtained 40 per cent. of the marks in each subject and 60 per cent. of the aggregate marks; the second, in duplicate, giving the names and marks of others who have been recommended under the Regulations, with a full statement in each case of the reason for such recommendations.

The report shall be sent by mail to the Department of Education at the earliest possible moment, and not later than fifteen days after the close of the examination.

(3) The answer papers of candidates, unless when specially requested by the Minister, are not to be forwarded to the Department, but are to be retained by the Chairman until the 1st day of October, *after which no case is to be reconsidered.*

(4) The Entrance Board shall not make public any results whatever until its report has been dealt with by the Minister of Education.

PRINCIPAL'S CERTIFICATE

17. A certificate of the following form shall be handed by the candidate to the Chief Presiding Officer at the centre before the first examination paper of Group II is handed out.

JUNIOR HIGH SCHOOL ENTRANCE EXAMINATION

GROUP I

Principal's Certificate

To the Chief Presiding Officer at the High School Entrance centre at

....

Name of Candidate ....

Age ....

Address ....

Last Form at School ....

I. I hereby certify that the above named candidate—

(1) has been a pupil in this school for the last ....;
(months or years)

(2) has read the following four works in English Literature during the past year

....

....

(3) and has passed a final examination and has completed satisfactorily the course in the subjects of Group I prescribed for Entrance into the High Schools, viz.: Literature, History, Art, Physiology and Hygiene, and Nature Study.

II. I hereby further certify that the course in the subjects of Group I in my School has been approved by the Inspector, as provided in High School Reg. 3 (3) (*b*).

....
Principal.

School ....

Principal's Address ....

Dated ....

SENIOR HIGH SCHOOL ENTRANCE

18.—(1) (*a*) The subjects of examination for entrance into the Middle School of the High Schools shall be those of the Lower School of the High Schools, as follows:—

Oral Reading, English Literature, Geography, Spelling, English Composition, Writing, English Grammar, History (British and Canadian), Arithmetic and Mensuration, Algebra and Geometry, and Art, together with any two of the following: Book-keeping and Business Papers, Elementary Science and Agriculture, Latin, French, and German.

(2) (*a*) Candidates who are in attendance at a High School or at a Continuation School in which there is a Middle School shall not be admitted to this examination.

(*b*) Candidates at this examination shall not be required to have passed the Junior High School Entrance examination.

(3) (*a*) The Senior High School Entrance examination shall be held at the close of the school year at such centres as the Minister may select.

(*b*) The examination papers shall be prepared and the results reported to the Minister by a Provincial Board of Examiners appointed by the Minister and selected from the Inspectors and Principals of the Public, Separate, High and Model Schools.

(*c*) There shall be one examination paper in each subject, except Writing and Reading.

(*d*) The maximum for each of Writing and Oral Reading, shall be 50 marks, and for each of the examination papers 100; and the standard for pass shall be 40 per cent. in each of Writing and Oral Reading and in each paper, and 60 per cent. of the aggregate marks.

(4) (*a*) The Writing shall be judged from the answer papers in one of the other subjects, to be determined by the Minister from time to time.

(*b*) The examination in Oral Reading shall be conducted by an examiner appointed by the Minister, and shall include questions on the principles, to be based upon the passage read.

(*c*) The examination in English Literature shall be based on sight passages, and it will be necessary for the candidate to have read, during the year preceding the examination, in addition to the works taken up regularly in the class, at least four works in English Literature, prose and poetry; and to have taken up practically, as prescribed by the Regulations, the course in Elementary Science and Agriculture. A certificate to this effect shall be required from the Principal in the official form of application. The candidate shall also be required to have memorized the selections from the High School Reader prescribed by the Minister.

NOTE.—After the session of 1911-1912 the texts for class-work and the four additional works in English Literature shall be selected from a list prepared by the Department. For the session of 1911-12 Principals may select them for the classes concerned.

(*d*) At this examination a report may be submitted by the Principal, signed by all the teachers concerned, as to the standing of their candidates, which will be taken into account in settling the results. Only the names of the candidates who, in the opinion of the teachers, have completed satisfactorily the courses for the examination may be included in this report. In settling the results the Board shall attach such value to the report as may in its judgment be justifiable.

(5) (*a*) The distribution of the question papers, the conduct of the examination at the various centres, the reading of the answer papers, and the determining of the results shall be provided for by the Department.

(*b*) The fee for this examination shall be $5.00, $3.00 of which shall be forwarded to the Department and $2.00 to the Board of the School at which the examination is held. All or part of the fee may be paid by the Board of the School from which the candidate comes.

(*c*) The School Board at each centre shall pay the cost of the stationery and any other necessary supplies, and all other incidental expenses.

(*d*) Candidates for this examination shall make application to the Public School Inspector before May 1st, on an official Form, to be obtained from him.

ESTABLISHMENT OF DAY HIGH SCHOOLS

19.—(1) (*a*) Subject to the provisions of Circular 8, a High School with three teachers may, on the report of the High School Inspector, occupy the same building as a Public School; but a High School with four or more teachers shall occupy a separate building and separate grounds.

(2) The plans and site of every High School hereafter erected or remodelled shall be subject to the approval of the Minister of Education.

(3) In all High Schools established since July, 1891, or to be hereafter established, there shall be a Principal and at least two assistants. High Schools established before that date with a Principal and one assistant shall remain legally constituted.

(4) No grant shall be made to a new High School that does not comply with the instructions of the Minister of Education with regard to accommodations as set forth in Circular 8, and that does not provide an initial equipment of at least the following value:

Library, $300; Scientific Apparatus, $300; Maps, Charts, and Globes, etc. $50; and Art Models, $50.

ESTABLISHMENT OF COLLEGIATE INSTITUTES

20. Under the provisions of section 9 (2) of the High Schools Act, a High School may be raised to the status of a Collegiate Institute by the Minister when it is shown to his satisfaction that the Trustees have provided:

(1) Adequate and suitable school accommodations, including a Gymnasium;

(2) Equipment of the value and character recognized as the maximum in Reg. 25;

(3) The staff prescribed in Reg. 24.

ESTABLISHMENT OF APPROVED SCHOOLS

21. On the report of a High School Inspector, a High School or Collegiate Institute shall be entitled to the status of an Approved School of the First or the Second Grade, and to the special grant herein provided therefor, according to the degree of the completeness with which it fulfils the following requirements:

ACCOMMODATIONS AND EQUIPMENT

(1) The accommodations, including the provisions for the teaching of Science, shall be both adequate and suitable for the courses taken up.

(2) (*a*) The equipment shall be that prescribed for the class of school and shall be both adequate and suitable for the courses taken up. See Reg. 25.

(*b*) Adequate equipment for practical work by the pupils in Biology, Physics, and Chemistry is indispensable.

STAFF

(3) The members of the staff shall be legally qualified and competent to teach all the subjects under their charge.

ORGANIZATION AND MANAGEMENT

General

(4) (*a*) The organization and management of the whole school shall meet the demands of the regulations and the necessities of the situation.

(*b*) In particular, the minimum time apportioned to Elementary Science, Reading, and Physical Culture shall be that prescribed under Regulations 35 and 36.

(*c*) Schools shall not be approved in which any of the Forms or Classes are badly graded or which are so large as to interfere with the efficiency of the teaching.

NOTE 1.—In schools with five or more teachers, the total number on the roll at any one time should not exceed an average of 30 to each teacher; in schools with fewer than five teachers, a smaller number may be necessary in order to secure efficient grading. When in doubt, School Boards and Principals should consult the Inspector.

NOTE 2.—In order to secure progressive development and economy of effort, division of a subject among teachers should be avoided. In the larger schools this may not be practicable or desirable in all subjects of the lower Forms, but the general principle should be observed except for special reasons.

Science Teaching

(5) The courses in Biology, Physics, and Chemistry shall be taken up practically throughout by the pupils.

EXHIBITS

(6) (*a*) The pupils' work in Art, their note-books in Science, and their exhibits in Book-keeping and Business Papers as prescribed in the courses of study, shall be satisfactory.

(*b*) As far as practicable, the complete exhibits of each pupil for each year in the Art, Science, and Book-keeping and Business Papers of the Lower School should be collected by the Principal at the end of June, and held for the Inspector's examination and rating.

(*c*) All exhibits of the Art and Science of the Lower School should indicate, by an intelligible system of dating, when the work was done; and the work submitted for examination should, as far as practicable, be arranged in the order in which it was accomplished.

(*d*) Care should be taken to keep separate the first year work and the second year work of each pupil.

NOTE.—The Science note books should indicate that in all important particulars the work of the course has been taken up. Until the pupil understands how to record his observations, the teacher may find it desirable to have the notes made in the class-room neatly copied out afterwards; but as soon as practicable this should be discontinued, and the notes finally made in the class. Moreover, while neatness must be insisted on and drawings are essential, an unreasonable amount of time should not be spent in elaboration.

INSPECTOR'S EXAMINATIONS

(7) The Inspector's examinations, both oral and written, shall test whether the work of the different classes, especially those of the Lower School, has been properly done.

FORFEITURE OF STATUS

(8) Subject to the approval of the Minister, a school shall for any year lose the status of an Approved School, if, on the report of the Inspector, it fails to comply with the requirements herein prescribed therefor.

ESTABLISHMENT OF NIGHT HIGH SCHOOLS

22.—(1) Night High Schools may be established by Boards, using the accommodations and equipment of the Day High Schools.

(2) A Night High School shall not have fewer than 20 pupils on the roll in regular attendance, who are not registered in a Public School or a Day High School.

(3) Night High Schools shall be subject to the same regulations as the Day High Schools with respect to the admission and the discipline of the pupils, the duties and qualifications of teachers, and the use of text-books.

(4) The subjects of study shall be selected from the course of study for the High Schools by the Principal, with the concurrence of the Board.

(5) The Department will pay out of any sums that may be voted by the Legislature for Night High Schools the following proportion of the total salaries of the staffs: In cities with populations of 150,000 and over, one third; in other cities, one half; in towns, two thirds; and in villages, five sixths.

GENERAL LEGISLATIVE GRANTS

HIGH SCHOOLS

23.—(1) Every Day High School that complies with the Regulations of the Department shall be entitled to the following grants:

(*a*) A fixed grant of $375 for schools with fewer than four teachers, and of $350 for other High Schools;

(*b*) In respect of equipment, eight per cent. of the total approved expenditure, but so as not to exceed $132 in the case of High Schools with two teachers, or $260 in the case of High Schools with three or more teachers.

(*c*) In respect of school accommodation, a maximum of $80 in the case of High Schools with two teachers and $120 in the case of High Schools with three or more teachers; and

(*d*) In respect of salaries, eight per cent. of the approved expenditure over $1,500, but so as not to exceed $600.

COLLEGIATE INSTITUTES

24. Every Collegiate Institute that complies with the regulations shall be entitled to the following grants:

(1) A fixed grant of $350;

(2) A grant in respect of approved equipment of $260;

(3) A grant in respect of approved school accommodation of $160; and

(4) Eight per cent. of the approved expenditure on salaries over $1,500, but so as not to exceed $600.

NOTE.—The grants under (2) and (3) are subject to reduction according to the character of the equipment and the accommodations.

APPORTIONMENT OF GRANTS

25. In apportioning the Legislative grant on equipment, the maximum value recognized for each class of school shall be as follows:

(1) High Schools with two teachers: Library, $300; Scientific Apparatus, $300; Biological Specimens, $50; Maps, Charts, Globes, etc., $50; Art Models, $50; Typewriters, $100; Gymnasium, not including equipment, $800.

(2) Collegiate Institutes and of High Schools with three or more teachers: Library, $600; Scientific Apparatus, $600; Biological Specimens, $100; Maps, Charts, Globes, etc., $50; Art Models, $100; Typewriters, $200; Gymnasium, not including equipment, $1,600.

NOTE 1.—Typewriters and a Gymnasium are optional for High Schools.

NOTE 2.—The catalogue of the equipment shall be kept in the School by the Principal and shall be accessible to any officer of the Department.

26.—(1) The instructions of the Minister in the matter of grading shall be followed in apportioning the grant for school accommodations. See Circular 8.

(2) If the amount voted by the Legislature is insufficient to pay the grants in full, the Minister may make a *pro rata* reduction.

(3) No High School or Collegiate Institute shall be entitled to any Legislative grant on its gymnasium for any year in which the time prescribed in Reg. 36 for Physical Culture has not been provided.

(4) On the report of a High School Inspector that the equipment or the accommodations are inadequate or unsuitable, or that one or more members of the staff are inefficient or not legally qualified, such reductions may be made in the grants payable upon the equipment, the accommodations, and the salaries of the staff, as the Minister may deem expedient.

SPECIAL LEGISLATIVE GRANTS

APPROVED SCHOOLS

27. Schools that have been ranked as Approved shall be entitled, on the report of the High School Inspector, to additional grants, as follows:

	Grade I	Grade II
High Schools with fewer than four teachers	$80	$40
High Schools with four or more teachers	$120	$60
Collegiate Institutes	$160	$80

MIDDLE SCHOOL DRAWING

28. An annual grant of $25.00 shall be made to a High School Board, to be spent in special Art equipment, and of $75.00 to the teacher of the Middle School Course in Art, as an addition to his regular salary, on the following conditions:

(1) The teacher shall hold a certificate as Specialist in Art from the Department.

(2) The course shall extend over at least one year and the provision therefor in the time-table shall be at least three periods a week of one hour each, one of which may be taken up out of doors for landscape drawing and painting.

(3) The class shall consist of at least six members in regular attendance who have already completed satisfactorily to the Principal the Lower School Art course.

(4) The Inspector's report of the equipment, organization, teaching, and the pupils' work shall be favourable.

NOTE.—As far as practicable, the complete exhibits of each pupil's work shall be held for the Inspector's examination.

ORGANIZATION AND MANAGEMENT

DUTIES OF STAFFS

29.—(1) In every High School or Collegiate Institute the head teacher shall be called the Principal, and the other teachers Assistants.

(2) The authority of the Principal of the High School shall be supreme in all matters of discipline in his own school.

(3) When the Public and High Schools occupy the same building, the authority of the Principal of the High School shall be supreme in all matters of discipline in those parts of the accommodations which the schools occupy in common.

(4) The Principal shall determine the number of Forms, the number of pupils to be assigned to each Form, and the order in which the subjects in each Form shall be taken up by the pupils.

(5) The Principal shall make such promotions from one Form to another as he may deem expedient; he shall also assign the subjects of the Courses of Study among the Assistants.

(6) Where, under section 26 of *The High Schools Act,* a Board appoints a Supervising Principal, the provisions of Reg. 29 (2), (4) and (5) shall be subject to such modifications as may be hereafter prescribed by Regulation.

(7) *Mutatis mutandis* the duties of High School teachers are the same as those prescribed for Public School teachers under section 82 of *The Public Schools Act.*

QUALIFICATIONS OF STAFFS

30.—(1) The Principal of a High School shall hold a Principal's certificate and the Assistants shall hold High School Assistants' certificates.

(2) The Principal of a Collegiate Institute shall hold a Principal's certificate, and there shall be at least five teachers on the staff, as follows: One specialist in Classics, one in Mathematics, one in Moderns and History, and one in Science, one of the staff of the School holding a specialist's certificate in Art, and one a specialist's certificate in the Commercial subjects; with such other assistants as will secure thorough instruction in all the subjects of the High School course as

far as Entrance into the Faculties of Education and pass Senior and pass and honour Junior Matriculation into the University of Toronto.

NOTE.—Subject to such necessary modifications as may be approved by the High School Inspector, each specialist shall be at the head of his department and shall take at least the senior classes therein. In the larger schools where there are more specialists than one in a department, the Principal shall determine the division of the subjects. Specialists in English and History and in French and German have been provided for the larger schools, thus permitting of a sub-division of the subjects taken by a specialist in Moderns and History.

(3) Special teachers of Music, Physical Culture, Manual Training, Household Science, and Agriculture and Horticulture, shall possess the qualifications prescribed by the Minister of Education.

NOTE.—At present the supply of Art Specialists is not adequate. Until it is, the Minister will accept, on the report of the High School Inspector, such qualifications as are found to be the highest available. But it is the duty of each Collegiate Institute Board to provide a specialist as soon as practicable.

31.—(1) If, after due advertisement, a Board is unable to obtain a legally qualified teacher, a temporary certificate for all or a part of the current school year may be granted by the Minister to a suitable person on the application of the Board.

(2) In the case of substitute teachers without legal qualifications, appointed in an emergency, no engagement for longer than two weeks shall be made without the formal consent of the Minister.

SESSIONS

32.—(1) (*a*) Unless otherwise directed by the Board, the pupils attending a Day High School shall assemble for study at nine o'clock in the forenoon, and shall be dismissed not later than four o'clock in the afternoon. Such recesses at noon and during the forenoon and afternoon shall be allowed as the Board may approve; but in no case shall the school hours be less than five hours a day, including the recesses in the forenoon and afternoon.

(2) Pupils regularly admitted and not registered in a Day High School may attend a Night High School from the 1st of October until the 31st of March. The hours of study in the Night High School shall not exceed two and a half each session.

DUTIES OF PUPILS

33.—(1) A pupil registered in a Day or a Night School shall attend punctually and regularly. He shall be neat and cleanly in his person and habits, diligent in his studies, kind and courteous to his fellow pupils, obedient and respectful to his teacher, and shall submit to such discipline as would be exercised by a kind, firm, and judicious parent.

(2) (*a*) A pupil on returning to school after absence shall give the Principal, from the parent or guardian, orally or in writing, as may be required by the Principal, a proper reason for his absence.

(*b*) A pupil may retire from school at any hour with the consent of the Principal, or at the request, either oral or written, of his parent or guardian, provided that, in the opinion of the Principal and the Board, this privilege is not abused.

(*c*) A pupil shall be responsible to the Principal for his conduct on the school premises and on the way to and from school, except when accompanied by his parent or guardian or by some person appointed for this purpose by such parent or guardian.

(*d*) On the report of the Principal, a Board may suspend a pupil whose parent or guardian fails to provide him with the text books or other supplies required in his course of study, or to pay the fees imposed for such purpose by the Board.

(*e*) On the report of the Principal, a Board may suspend a pupil who injures or destroys school property, until the property destroyed or injured is made good by the parent or guardian of such pupil.

NOTE.—Section 82 (*i*) of *The Public Schools Act* specifies the other offences for which a pupil may be suspended, and the mode of suspension [see also Reg. 29. (7) above].

(3) No pupil once enrolled shall be admitted to another High School, unless he presents a letter of honourable dismission from the Principal of the School he last attended. In the event of a dispute, the parties thereto shall submit full particulars of the question for final settlement to the Inspector of the School into which the pupil seeks admission.

ORGANIZATION OF THE COURSES OF STUDY

34.—(1) The Courses of Study shall be taken up in three main divisions: the Lower School, the Middle School, and the Upper School; each being regularly a two years' course.

(2) The courses shall consist of the General Course, and the following Special Courses: (*a*) the Courses for pass Senior and pass and honour Junior Matriculation into the University of Toronto, and the Preliminary examinations of the Learned Professions; (*b*) the Courses for admission to the Model and Normal Schools and the Faculties of Education.

NOTE 1.—The regulations and details of the Agricultural and Industrial and Technical Schools and Classes maintained by the High School Boards under *The Industrial Education Act* of 1911 may be obtained on application to the Deputy Minister.

NOTE 2.—The University Matriculation examinations, pass, honour, and supplemental are conducted by the Department of Education; but the examiners and associate examiners therefor are appointed and the examination results settled by the University Matriculation Board.

NOTE 3.—The Learned Societies select the papers that will meet the requirements of their preliminary examinations.

NOTE 4.—On request, the results of the examinations in which they are concerned are communicated by the Department to the Universities and the Learned Societies.

(3) The High School Board shall select the courses on the report of the Principal, but a course shall not be taken up if, on the report of the High School Inspector, the Minister decides that the staff, the equipment, or the accommodations are inadequate or unsuitable therefor.

(4) The following subjects shall be obligatory on all pupils:

(*a*) The Lower School courses in Geography, Arithmetic and Mensuration, English Grammar, Writing (apart from Book-keeping), Reading, and Physical Culture; and

(*b*) The Lower and the Middle School courses in English Composition, English Literature, and History.

(5) Pupils in the General Course shall take in addition:

(*a*) The Art and the Elementary Science of the Lower School; and

(*b*) Such other subjects of the Course as may be agreed upon between the pupil's parent or guardian and the Principal of the school.

(6) One of the courses prescribed in Reg. 34 (2) above, and not more without the consent of the Principal, shall be taken by each pupil; but the Principal may omit or curtail the course in any of the obligatory subjects in the case of individual pupils whose circumstances, in his judgment, deserve special consideration.

35. The following shall be the average minimum amount of time to be devoted to each of the following subjects, separately from the other subjects, in the courses where such subjects are obligatory:

(1) *Reading*.—(*a*) Two lessons of thirty minutes each every week for the first year and one of thirty minutes every week for the second year in the Lower School, the average number of pupils in each class being not more than twenty-five and the time being increased or diminished proportionately when the average in the class is greater or less than twenty-five.

(*b*) In all the school subdivisions, Reading shall also be taken up systematically in connection with English Literature.

(2) *Elementary Science*:—

(*a*) For Biology, a lesson of thirty minutes every day for two years in the Lower School, or the equivalent thereof, during the months of September and October, and from the beginning of April to the end of June, the time for Biology being divided about equally between Zoology and Botany.

(*b*) In Physics and Chemistry a lesson of thirty minutes three times every week for two years in the Lower School, or the equivalent thereof, during the rest of the school year.

36.—(1) (*a*) The course in Physical Culture (Drill, Calisthenics, and Gymnastics) is obligatory in Collegiate Institutes and in High Schools which have a gymnasium, and shall be taken up in lessons of thirty minutes each, three times every week, in each Form of the Lower School, and twice every week in the Middle and Upper Schools.

(2) In High Schools having no gymnasium, Drill and Calisthenics shall be taken up as often as the weather, the accommodations, and the adequacy of the staff will permit; and Gymnastics may be omitted.

(3) No pupil shall be exempted from the course in Physical Culture except upon a medical certificate, or on account of evident physical disability, or for other reason satisfactory to the Principal.

(4) In all the Forms the sexes shall be separately trained.

(5) The Principal may substitute for part of the course in Physical Culture suitable sports and games, in which all the members of a class shall take part, and which shall be under the supervision of the members of the staff.

DEPARTMENTAL AND UNIVERSITY MATRICULATION COURSES

37. The following Courses of Study have been prepared primarily for the general student; but they include the Courses prescribed for University pass and honour Junior Matriculation into the University of Toronto, for the Preliminary Examinations of the Learned Professions, and for admission to the Model and Normal Schools and the Faculties of Education. Subject to any instructions issued from time to time by the Minister, the details of the foregoing Courses shall be as set forth below:

Religious Instruction.—(1) (*a*) Every High School shall be opened with the reading of the Scriptures and the Lord's Prayer, and shall be closed with the

Lord's Prayer, or the prayers authorized by the Department of Education; but no pupil shall be required to take part in any religious exercises objected to by his parent or guardian. In schools without suitable waiting-rooms, or other similar accommodation, if the parent or guardian demands the withdrawal of a pupil while the religious exercises are being held, such demand shall be complied with and the reading of the Scriptures shall be deferred in inclement weather until the closing.

(*b*) To secure the observance of the preceding regulation, the teacher, before commencing a religious exercise, shall allow the necessary interval to elapse, during which the children or wards of those, if any, who have signified their objection may retire.

(*c*) If, in virtue of his right to be absent from the religious exercises, any pupil does not enter the school room till the close of the time allowed for religious exercises, such absence shall not be treated as an offence against the rules of the school.

(*d*) When a teacher claims to have conscientious scruples in regard to opening or closing school as herein prescribed, he shall notify the Board to that effect in writing; and it shall then be the duty of the Board to make such provision as it may deem expedient, for the carrying out of the requirements of (1) (*a*) above.

(2) (*a*) The Scriptures shall be read daily and systematically; the parts to be read may be taken from the book of selections adopted by the Department for that purpose, or from the Bible, or from the list of the Selected Scripture Readings of the International Bible Reading Associations, as the Board by resolution may direct.

(*b*) A Board may also order the reading of such parts by both pupils and teachers at the opening and the closing of the school, the repeating of the Ten Commandments at least once a week, and the memorization of passages selected from the Bible.

(3) (*a*) A clergyman of any denomination shall have the right, and it shall be lawful for the Board to allow him, to give religious instruction to the pupils of his own church, in each school house, at least once a week, after the hour of closing the school in the afternoon.

(*b*) Under the same conditions, a clergyman, selected by the clergymen of any number of denominations, shall also have the right to give religious instruction to the pupils belonging to such denominations.

(*c*) If the clergymen of more than one denomination apply to give religious instruction in the same school house, the Board shall decide on what day of the week the school house shall be at the disposal of the clergyman of each denomination, at the time above stated.

(4) Emblems of a denominational character shall not be exhibited in a High School during regular school hours.

MANNERS AND MORALS.—Throughout the courses the teacher shall incidentally, from current incidents, from lessons in literature, history, etc., and by his own example as well as by precept, give instruction in moral principles and practices and in good manners.

The following outline is suggested:

To oneself: Manliness or womanliness, purity, health, nobility, self-control, self-reliance, generosity, truthfulness, cultivation of moral courage, will power, economy, industry, good taste in dress, etc.

To teachers: Respect, obedience, punctuality, neatness, order, etc.

In the home: Respect for parents, due consideration for brothers and sisters, other relatives, etc.

To the people generally: Honesty, courtesy, charity, toleration, justice, respect for property, consideration for the aged, the infirm, etc.

To our country: Love, courage, honour, obedience to law, etc.

Treatment of the lower animals: Humanity, kindness.

Manners: Proper language and conduct at home, at school, on the street, and in public places, at social gatherings, etc.

PHYSICAL CULTURE.—The main object of the course is the symmetrical development of the body, securing at the same time strength and grace with correct and prompt obedience to the will. A systematic and well-developed course of exercises in Drill and Calisthenics, both free and with apparatus, and in Gymnastics, when practicable, should be taken up in each of the sub-divisions (See Reg. 36). While dependent to some extent upon the accommodations and equipment, the exercises should always be suitable in character and frequency to the age and physical condition of individual pupils. Prevailing defects should be studied and exercises and directions given to correct them. School games and sports should be systematically encouraged.

NOTE.—"The Syllabus of Physical Exercises for Public Elementary Schools," which the Minister has authorized, and a copy of which will be supplied to each School library, shall form the basis of the course in Physical Culture.

1—LOWER SCHOOL

READING.—Intelligent and intelligible natural reading. The principles learned incidentally. Exercises in breathing, articulation, and vocalization.

ENGLISH GRAMMAR.—The principles of etymology and syntax, including the logical structure of the sentence and the inflection and classification of words. The elementary analysis of words, with the most important prefixes and suffixes and Latin and Greek root-words. An elementary knowledge of the formation of the sounds of the language, with their representation by means of the alphabet. An outline of the history of the development of the language.

NOTE.—The use of English grammar in teaching correct oral and written composition, though important, especially when the principles of good English can be intelligently applied, is secondary to the insight it gives into the structure of our thinking and expression. For the first year the work should be confined to a thorough review and slight extension of the course prescribed for the Fourth Form of the Public Schools, and the practical value of the subject in connection with English composition should be emphasized. The intensive and more reflective study should be reserved for the second year of the course.

ENGLISH COMPOSITION.—Oral and written composition: Elements of Narration, Description, Exposition, and Argumentation. Letter writing. Oral and written reproductions or abstracts. Class debates. The systematic and careful application of the principles of good English to the correction of mistakes made by the pupils in speaking and writing.

NOTE.—In the course, actual practice in writing compositions of various kinds should largely predominate. The main principles of composition (rhetoric) should be learned from the criticism of the compositions, and systematized as the work proceeds.

ENGLISH LITERATURE.—Intelligent comprehension of suitable authors, both prose and poetry. Systematic oral reading in class. Memorization and recitation of choice selections in prose and poetry.

NOTE 1.—The object of the course in the Lower School is the cultivation of a taste for good literature, not by minute critical study, but by reading at home and in school aloud and silently with due attention to the meaning, standard authors whose works will quicken the imagination and present a strong element of interest. Such authors should be chiefly narrative, descriptive, and dramatic.

NOTE 2.—In each of the two years of the course, at least four books (prose and poetry) shall be read, in addition to the regular class work. Part of such books should be read at home or during study periods, and reviewed in class with special reference to the more difficult passages. At the beginning of each school year, a short list should be made out for each Form, under a few heads, of such suitable works as may be obtained in the school, public, or other library, and each pupil should be required to read during the year at least one under each head in addition to those taken up in class. The work in literature should be systematically correlated with that in oral and written composition.

HISTORY.—A review of the history, British and Canadian, as prescribed for the Fourth Form of the Public Schools, followed by a more detailed study of the leading events. Supplementary reading and biographical sketches of persons famous in British and Canadian history and in Greek and Roman history. The elements of the civil government of Britain and Canada, and the duties of citizenship.

NOTE 1.—The main purpose of the course at this stage is to train the pupils to grasp the leading events in their logical order, and to arouse an interest in historical reading. As soon as practicable, a beginning should be made in appreciating the logical connection of events. Pupils should be trained to use the school, public, and other libraries for reference purposes and for supplementary reading.

NOTE 2.—The work in history should be systematically correlated with that in oral and written composition, and so much geography should be taken up as will secure intelligent comprehension of the topics dealt with. Basing compositions on historical topics, especially such as will require supplementary reading, is one of the best means of teaching the subject.

NOTE 3.—It is recommended that for the review prescribed above the Public School Histories of England and Canada be used as long as may be necessary.

ARITHMETIC AND MENSURATION.—*Arithmetic.*—Review of principles; measures and multiples; fractions (vulgar and decimal); contracted methods of computation; compound quantities, including the metric system; square root; commercial arithmetic; applications of percentage, including commission, insurance, taxes, interest, discount, stocks, and exchange; oral arithmetic.

Mensuration.—The rectangle, triangle, circle, parallelopiped, prism, cylinder, pyramid, cone, and sphere.

NOTE 1.—The processes and problems in the commercial work shall be such as find *direct* application in ordinary life. Accuracy, rapidity, and neatness of work shall be kept in view.

NOTE 2.—The course is a two years' one. In the prescribed text-book the mensuration is completed before the commercial arithmetic is begun. The teacher should, however, use his own judgment as to the order in which the different parts of the work shall be taken up. During the first year, attention should be confined to the simpler and more practical parts of the mensuration and commercial arithmetic, the more difficult parts of both theory and exercises being reserved for the second year's work.

ALGEBRA.—Elementary work; factoring; highest common factor and lowest common multiple; fractions; simple equations of one, two and three unknown quantities; square root, cube root.

NOTE.—During the first year the study of arithmetic should be an intensive one, the work of the Public Schools being thoroughly reviewed. After the first year the stress should be placed upon algebra.

GEOMETRY.—Definitions; fundamental geometric conceptions and principles; use of simple instruments, compasses, protractor, graded rule, set-square; measurement of lines and angles, and construction of lines and angles of given numerical magnitude; accurate construction of figures; some leading propositions in Euclidean plane geometry, reached by induction as the result of the accurate construction of figures; deduction also employed as principles are reached and assured. The course in Theoretical Geometry begun.

For the details of the course in Theoretical Geometry, see Appendix B, I.

NOTE.—The introductory course in Practical Geometry, which is intended to be a six months' one, should emphasize physical accuracy, exactness in drawing lines of required length, in measuring lines that are drawn, in constructing angles of given magnitude, and in measuring angles that have been constructed. The course in Geometry retains Euclid's common notions, regarding them from modern standpoints.

LATIN AND GREEK.—The elementary Latin book, including introductory work in the prose authors. The Greek book begun in the second year.

NOTE.—Throughout the courses in Latin and Greek, the main objects should be accuracy of knowledge of forms and syntax, accuracy of translation into idiomatic English, and the ability to translate at sight. Attention should also be given to pronunciation and reading aloud, and to the consideration of Latin and Greek words as the roots of English words.

FRENCH AND GERMAN.—The elementary French and German books, including introductory work in authors.

NOTE 1.—The work in French should at first be wholly without a text-book, for the training of the ear and tongue; grammar learned incidentally. Names of common objects, states, and actions. Memorization of suitable selections from simple poetry. Reading anecdotes, short stories, and easy descriptions, with oral drill on the material read. After three or four months of this course the systematic study of the elementary book should be begun, the work being chiefly oral. German should be begun in the same way the second year, but with greater apportionment of time, and more rapid progress. When desired, German may be begun first.

NOTE 2.—Too much importance cannot be attached to Oral Work. Teachers should improve themselves by attending suitable summer classes and by residence for a time in France and Germany. Boards should assist them, when practicable, by allowing them leave of absence for the latter purpose.

GEOGRAPHY.—*First Year*: A fuller study of the phenomena of air, earth and water, and of the Political, Commercial and Industrial Geography of the Public School Course.

Second Year: The more detailed study of physical geography, as follows: Changes of the earth's surface; the rocks; rivers, valleys, and lakes; weathering, soils, and underground waters; wind work; glaciers and their work; plains, mountains, and plateaus; volcanoes and earthquakes; the atmosphere; winds, storms, and climate; the earth's magnetism; the ocean; the meeting of land and sea; life on the earth; geological history of Canada; the earth and the sun; the solar system; other heavenly bodies.

NOTE 1.—Excursions should be made where practicable and desirable, especially in connection with the study of the rocks, minerals, soils, and land formation of the district and of the forces that change the earth's surface.

NOTE 2.—Books of travel and other supplementary reading in geography should be supplied; also, when practicable and desirable, exhibits of the material and products characteristic of the countries studied.

NOTE 3.—Pictures of famous places, etc., should be shown by means of mounted photographs and the school lantern.

ELEMENTARY SCIENCE.—An elementary practical course in Botany, Zoology, Physics and Chemistry. For the details of the course, see Appendix A.

NOTE 1.—The objects of the course are to train pupils in correct observation and deduction, to give, in connection with the instruction in geography, a fair knowledge of the world around them to those who will not remain at school more than a few years, and to lay the foundation for the more detailed study of each subject in the case of those who will continue the work into the higher Forms. The spirit of the Nature Study of the Public Schools should be retained, but the teacher should introduce a more systematic treatment of the subject, with such organization of the material as will lead to simple classification and generalization. The course should be correlated with Geography, Drawing, and English Composition.

Note 2.—(*a*) Each pupil should possess a good lens, and be taught how to use it. The compound microscope should be used regularly by the teacher for illustration. Approved methods of collecting and preserving botanical specimens and of keeping live animals suitable for study should be systematically followed. Much of the practical work, especially the observations, will necessarily be done out of doors by the pupils alone, under the direction of the teacher, or by the pupils conducted by the teacher.

(*b*) The courses in Physics and Chemistry shall be as far as possible experimental and the pupils should be encouraged to work at home and to prepare simple apparatus.

Note 3.—When practicable, there should be an aquarium, and every school should have an arboretum and a herbarium. A museum consisting of specimens illustrative of the courses should also be established. The pupils should be encouraged to provide specimens from the locality.

Note 4.—No Flora or Fauna is authorized as a text-book for the pupils, but it shall be the duty of the Board to provide in the school library a sufficient supply for the pupils' use. Other works of reference shall also be provided, and the pupils should be encouraged to use them as supplementary reading, never as text-books or as substitutes for original work.

Note 5.—Drawing and systematic written description should be required throughout the courses, dated and preserved in note-books for comparison and inspection, the work being systematically supervised by the teacher. *Notes shall not be dictated by the teacher.*

Agriculture: For the details of the Course see Appendix A.

Note.—In the Zoology and Botany of the Elementary Science and Agriculture Course, the topics under "Work in Agriculture" may be substituted for those under "Outdoor Work." In the same course, the topics: Soils, Milk, etc., detailed in Appendix A, may be substituted for the Physics of the second year, where the home interests and future work of the pupils render such a choice desirable. For assistance in introducing or carrying on this work, teachers should apply to *The Director of Elementary Agricultural Education*, Ontario Agricultural College, Guelph, who will supply material for demonstration and experimental plots, as well as instruction sheets.

Art.—First Year.—*Representation*: The use of pencil, charcoal, crayons, pen and ink. The drawing of type solids in light and shade. The principles of freehand perspective and their application; the laws of composition; the use of brush and ink in studies from nature; the study of colour; the solar spectrum; the six colours; intermediate hues; neutralization of colour; the nine values; harmonies of colour; the use of the brush and water-colours; the drawing and painting of common objects and of specimens from nature, such as fruits, flowers, leaves, sprays, and trees, and birds and other animals; pose drawing; the illustration in line, silhouette, neutral values, and colour, of stories and school compositions; imaginative sketches; the drawing and painting of simple landscapes from nature; the mounting of drawings.

Ornamental Design: The use of instruments; simple geometrical problems; the principles of design; geometrical forms and their application; nature as a source of design; conventionalization of natural forms; the designing in neutral values and in colour, of surface patterns, such as tile or inlaid floors, wall papers, school booklets, calendars, etc.; lettering.

Note.—The different parts of the courses may be taken up in whatever order the teacher prefers. For a list of suitable models, etc., see Appendix C.

Second Year.—The Course for the First Year reviewed, and the following subjects extended:

Representation: Drawing from casts; the principles of freehand perspective and their application; the laws of composition; the study of colour; harmonies of colour; monochrome; the drawing and painting of common objects, and of specimens from nature; pose drawing; the illustration in line, silhouette, neutral values, and colour, of stories and school compositions; imaginative sketches.

Ornamental Design: Principles of design; geometric forms for practical or industrial application; nature as a source of design; conventionalization of natural forms; the designing, in neutral values and in colour, of surface patterns suitable for floor coverings and textile fabrics, book covers, etc.; lettering.

NOTE 1.—Within reasonable limits, the fac-similes of works of great artists may be copied in connection with the study of technique. See Prang's Text-book of Art Education, No. 7, p. 2.

NOTE 2.—The note under Art, First Year Course, applies here also.

BOOK-KEEPING AND BUSINESS PAPERS.—*Business Papers.*—Receipts, promissory notes, drafts, orders, deposit slips, cheques, bank drafts, bills of goods, invoices, accounts, endorsement and acceptance and consequent liability.

Book-keeping.—Double and Single Entry involving the use of journal, cash book, sales book, bill book, ledger, financial statements, and closing the books. Changing from Single to Double Entry.

NOTE 1.—The minimum amount of work prescribed in Book-keeping and Business Papers, for Approved School standing, and for admission to the Model and Normal Schools and the Faculties of Education, is as follows: Sets II, III, IV, (or V), VI, and XI (Part I) of the authorized text-book, or the equivalent thereof in character and amount, and a Journal Entry to change Set XI from Single to Double Entry.

The foregoing sets when worked out shall occupy about thirty pages of foolscap (thirty-five lines to the page) or about forty pages of letter paper (twenty-eight lines to the page).

NOTE 2.—*In each set and exercise, the transactions shall be dated according to the calendar of the year in which the set or exercise is worked out in the School. The name of the month in the text-book need not be changed.*

WRITING.—Correct position and movement. Principles of letter formation. Formation of a graceful, legible business hand.

SHORTHAND.—The theory. Dictation and transcription.

TYPEWRITING.—Copying documents. Transcription of shorthand notes. Manifolding, letter-press copying. Touch system recommended.

MANUAL TRAINING.—*First year:* Drawing and woodwork. [illegible]

Second year: Drawing, and any one of the following: Wood-turning, Forging, and Machine Shop Practice. For details see Appendix D.

NOTE 1.—If the pupil has received two years' manual instruction in the Public School, approved by the Inspector, before entering the High School, the course in Wood-turning or Forging outlined for the second year may be taken in place of the Woodwork of the first year.

NOTE 2.—The courses in Forging may be taken only by those who have had two years in Woodworking, and that in Machine Shop Practice only by those who have previously taken Forging or Woodturning.

HOUSEHOLD SCIENCE.—Needlework, cookery, sanitation, etc. Three courses. For details see Appendix E.

NOTE.—The first and second courses are to be taken only by those who have not already received instruction approved by the Minister; the second and third courses by others.

II—MIDDLE SCHOOL

ENGLISH COMPOSITION.—The Course of the Lower School in oral and written composition continued and extended. Oral and written reproduction or abstracts. Class debates. The study of models of prose-writing systematically taken up towards the close of the course.

NOTE.—The Debating and the Literary Society should supplement the work in this subject.

English Literature.—The intelligent and appreciative study of authors, both prose and poetry, including those prescribed for pass Junior Matriculation into the University of Toronto. Systematic oral reading in class. Supplementary reading provided by the pupils themselves or supplied from the school and the public or other library. Memorization and recitation of choice passages from the prescribed authors.

Note.—At this stage, the pupils should be able to begin to appreciate literature as such. Besides works of the same character as those taken up in the Lower School, other works of a subjective character may be added. The purpose and the spirit of the author and the merits of his thoughts and style should now be moderately dealt with; his defects should not be emphasized. The chief object is still the cultivation of a taste for good literature, and the authors should be read partly in class and partly at home, both silently and aloud.

History.—*British History.* Great Britain and Canada from 1763 to 1885, with the outlines of the preceding periods of British (including Canadian) history.

Ancient History.—A brief outline of the history of the Oriental world. General outlines of the history of Greece to the fall of Corinth, and of the history of Rome to the death of Augustus, with a brief outline of the art, literature, philosophy, and social life of the Greeks and the Romans.

Geography.—The geography relating to the history prescribed.

Note 1.—The details of the political history are less important than the causes and the consequences of events; the social life, literature, art, etc., of the peoples; and the careers of their great men. The development of political institutions should also receive attention.

Note 2.—As in the Lower School, the work in history should be correlated with that in literature and oral and written composition as well as in geography. The beginnings of civilization and of the Eastern nations should be studied in outline before the periods prescribed in ancient history are taken up. The great contemporary movements in the history of Europe should also be briefly discussed.

Note 3.—The pupils should write short essays on historical subjects. Nothing is more valuable in teaching history than this, especially as it should involve wider reading than that provided by the authorized school text.

Algebra.—The course in the Lower School reviewed and continued. Indices, surds. Quadratics of one and two unknown quantities, the relation between their roots and co-efficients. Simple ratio and proportion. Simple graphs.

Geometry.—The course in the Lower School reviewed. A selection of the leading propositions in Elementary Synthetic Geometry. Exercises and deductions on the propositions of the syllabus, the constructions in Practical Geometry being such as naturally spring from the course in Geometry prescribed for the Middle School. For the details of the course, see Appendix B, I.

Latin and Greek.—The course in the Lower School continued. The special study of the texts prescribed for pass Junior Matriculation into the University of Toronto, with sight work.

French and German.—The course in the Lower School continued. The special study of the texts prescribed for pass Junior Matriculation into the University of Toronto, with sight work.

Physics.—The Lower School courses reviewed. An experimental course defined as follows, and including simple problems:

Electricity.—Magnetism; laws of magnetic attraction and repulsion; magnetic lines of force; phenomena of induction; inclination and declination of the compass. Production and detection of electricity. Electrical conductors and insulators; electroscopes and their construction; electrical conduction through air; radioactivity illustrated by means of uranium and thorium salts. Electrical conduction in liquids; electrolysis; electroplating and electrotyping. Voltameters, storage and voltaic cells; electrical condensers; condensing electroscopes; simple notions of potential; Ohm's Law; electrical units; galvanometers and voltameters; laws of resistance; divided circuits; experimental determination of current strength, resistance, and electromotive force; current induction and its general laws; the transformer, the induction coil, dynamo, telephone, motor, ether waves, Rœntgen rays, and wireless telegraphy.

Heat.—Nature and sources of heat; thermometers; maximum density of water; relation between volume and the temperature of a gas (Charles' Law); absolute temperature; change of state; latent heat; specific heat; mechanical equivalents of heat; transmission of heat.

Sound.—Vibrations: Transversal vibrations, illustrated with pendulums, rods, strings, membranes, plates; longitudinal vibrations illustrated with rods, strings, and columns of air. The use of the manometric flame. Production, propagation, and detection of sound waves. Velocity of sound, pitch; standard forks (acoustical C = 512, musical A = 870). Intervals; harmonic scale; diatonic scale; equally tempered scale. Vibration of air in organ pipes; nodes and loops in vibrating air columns and in vibrating strings; wave lengths and velocity relations. Laws of vibration of strings; interference phenomena; beats; resonance; reflection and absorption of sound.

Light.—The ether, the wave theory of light, rectilinear propagation, image through a pin hole, beam, pencil; photometry; shadow and grease spot photometers; reflection and scattering of light; laws of reflection, images in plane mirrors, multiple images in inclined mirrors, concave and convex mirrors, critical rays; drawing images, refraction, laws, and index of refraction; total reflection; path through a prism; lenses; drawing image produced by a lens by use of critical rays. Simple microscope; dispersion and colour; spectrum; recomposition of light; projection lantern.

CHEMISTRY.—The Lower School course reviewed. Physical and chemical changes. Elements, compounds, mixtures, and solutions. Fundamental chemical laws and principles, as definite proportions, multiple proportions, reciprocal proportions, constancy of mass, equivalence and valency. Rate of chemical reaction and the conditions that affect it. Avogadro's hypothesis and its applications. Ionization in solution. Properties of acids, bases, and salts. Types of chemical reactions, as oxidation, reduction, replacement, neutralization of acids and bases, catalytic action. Reactions in solutions.

The practical study of the following elements and their more important compounds for the purpose of learning their chemical properties and relationships, illustrating the laws and principles of Chemistry, and learning something of the commercial and industrial uses and preparation of materials derived from them:

Hydrogen, Oxygen, Sulphur, Sodium, Potassium, Nitrogen, Chlorine, Bromine, Iodine, Carbon, Calcium, Strontium, and Barium.

Quantitative exercises throughout the course.

NOTE.—Reciprocal Proportions and Valency will not form part of the work for the examinations until after the midsummer of 1912.

Art.—The Lower School course reviewed and the following subjects extended:

Representation: In the various mediums: charcoal, crayon, pencil, water-colour, monochrome, and pen and ink; the drawing and painting of landscapes from nature; a few typical problems in parallel and angular perspective; the drawing and painting of common objects and of specimens from nature; drawing from the cast; pose drawing.

Ornamental Design: The study and application of Historic Ornament; the mounting of drawings; plain and ornamental lettering suitable for drawings, booklets, book covers, calendars, programmes, school announcements, etc.; a study of the Historic styles of Architecture.

III—Upper School

English Composition and Rhetoric.—The Middle School course continued and extended. Course still both oral and written. Class debates. Critical study of prose models. The principles of effective expression (rhetoric) systematically studied.

Note.—As in the Middle School, the Debating and Literary Society should supplement the work in this subject.

English Literature.—The intelligent and appreciative study of authors, both prose and poetry, including those prescribed for honour Junior Matriculation into the University of Toronto. Systematic oral reading in class. Supplementary reading provided by the pupils themselves or from the school and the public library. Memorization and recitation of choice passages from the prescribed authors.

Note.—At this stage the pupil should be able to read literature still more appreciatively; but the chief object continues to be the cultivation of a taste for good literature, and critical study should be subordinated thereto.

Mediæval and Modern History.—General outline of Mediæval and Modern European History, with special reference to British History.

The geography relating to the history prescribed.

For the details of the courses and suggestions as to the mode of study, see Circular 11.

Note.—The subject should be dealt with as in the Middle School, but here, in particular, the comparative method should also be employed as far as practicable. The continuous history of Great Britain and Ireland and of the colonies should be taken up concurrently with that of the other European States. It is recommended that in connection with English composition, each pupil should select one or more historical topics to which he will devote special attention, utilizing for the purpose the books of reference available in the school, public, and other libraries.

Algebra.—Work of Middle School reviewed and extended. Theory of divisors. Ratio, proportion, and variation. Progressions. Scales of notation. Permutations and combinations. Binomial theorem. Interest forms, annuities, and sinking funds.

Geometry.—The course in Geometry of the Middle School reviewed and continued. An introductory course in Co-ordinate Geometry of the point, the straight line, and the circle. For the details of the course, see Appendix B, 2.

Trigonometry.—Trigonometrical ratios with their relations to one another; sines, etc., of the sum and difference of angles with deduced formulæ. Use of Logarithms. Solution of triangles. Expression for the area of triangles. Radii of circumscribed, inscribed, and escribed circles.

LATIN AND GREEK.—Course of the Middle School in grammar and composition continued. The special study of the authors prescribed for honour Junior Matriculation into the University of Toronto, with sight work.

FRENCH AND GERMAN.—Course of the Middle School in grammar and composition continued. The special study of the authors prescribed for honour Junior Matriculation into the University of Toronto, with sight work.

PHYSICS. 1. *Mechanics.*—Measurement of velocity; uniformly accelerated rectilinear motion; metric units of force, work, energy, and power. Momentum; energy, force and momentum relations; equilibrium of forces acting at a point; triangle, parallelogram, and polygon of forces; parallel forces; principle of moments; centre of gravity; laws of friction; numerical examples.

2. *Properties of matter.*—An experimental course illustrating the following topics: Constitution of solids, liquids, gases; energy; transmutation of energy; conservation of energy; kinetic theory of matter. Boyle's and Charles' Laws; Avogadro's Hypothesis. Heat, a mode of motion; absolute temperature; mechanical equivalent of heat.

Fluid pressure at a point; pressure on a horizontal plane, pressure on an inclined plane, resultant vertical pressure and resultant horizontal pressure, when liquid is under air pressure and when it is not; transmission of pressure; Bramah press; equilibrium of liquids in contact; with calculations relating to the preceding.

The barometer, isobars, weather forecasting. The siphon. Surface tension phenomena; surface energy illustrated with applications to filtration, dyeing, and agricultural problems. Flow of liquids—Torricelli's theorem, Bernouilli's theorem; variation of pressure with velocity of flow of liquid, with application to atomizers, Bunsen filter pumps, aspirators, forced draughts, ball nozzles, and curves of a baseball or golf ball.

CHEMISTRY.—An experimental course defined as follows:

Chemical theory of the Lower School reviewed and continued. Reactions, rates of reactions, reversible reactions, chemical equilibrium. The practical study of the following elements, with their most characteristic compounds, having regard to Mendelejeff's classification of the elements, and some of the most important economic and industrial applications: Hydrogen, Sodium, Potassium, Magnesium, Zinc, Calcium, Strontium, Barium, Boron, Aluminum, Carbon, Silicon, Tin, Lead, Nitrogen, Phosphorus, Arsenic, Antimony, Bismuth, Oxygen, Sulphur, Fluorine, Chlorine, Bromine, Iodine, Manganese, Iron, Copper, Nickel.

MINERALOGY.—An experimental course defined as follows:—

General chemical composition of the earth's crust. Meaning of term mineral; crystalline state of matter; physical character of minerals, hardness, streak, lustre, specific gravity, studied from actual specimens. Meaning of terms, rock, ore. The rock-forming minerals, Calcite, Quartz, Orthoclase, Plagioclase, Muscovite, Biotite, Hornblende, Pyroxene, Olivene, studied from hand specimens. Examination of hand specimens of the following rocks: Igneous—Granite, Syenite, Diorite, Gabbro, Diabase, Basalt. Aqueous—Sandstone, Conglomerate, Shale, Limestone. Metamorphic—Marble, Gneiss, Slate, Schists. Veins—kinds, how formed, how filled.

Determination of the following with the aid of simple mineral tables: Magnetite, Hematite, Pyrite, Galena, Gypsum, Halite, Graphite, Mispickel, Pyrolusite, Stibnite, Zinc blende, Chalcopyrite. Occurrence of gold, silver, coal. Chief deposits of economic minerals in Canada.

NOTE 1.—The Lower School course in Geology (under Geography) should be reviewed in connection with the study of the minerals.

NOTE 2.—Many of the minerals in the above list can be found in any well developed gravel pit or stone pile, or the glacial boulders scattered widely over Ontario. Pupils should be required to make excursions in the neighbourhood of the school for the purpose of obtaining them and observing the geological formations.

NOTE 3.—The determination of the minerals shall be made by observation of their physical properties and by means of the blow-pipe.

BIOLOGY.—*Zoology.*—The practical study of the external form and of the prepared skeleton of the various types prescribed. Prepared dissections may be used to supplement class dissection. Drawing by the pupils of their dissections is a necessary part of the course:

The Fish: Any one of the common fresh water fishes of Ontario; special attention to the organs of locomotion, circulation, respiration. As several species are easily obtainable, this class may be employed for studying the principles of zoological nomenclature.

The Frog: Comparison with the fish as to the organs above mentioned. Observation of the development of the spawn of one or more Amphibia.

The Reptile: A turtle and a snake. Comparison of both with a lizard.

The Bird: Special attention to the plumage, the bill and feet, and the modifications of the skeletal, muscular, and respiratory systems in connection with aerial life. Study of birds in relation to agriculture.

The Mammal: Characteristics of the chief domesticated and wild mammals of Ontario, as well as the main facts of internal structure of one of the smaller forms (*e.g.,* the rabbit or cat). Comparison of the teeth and feet of the pig, horse, sheep, rabbit, dog, mole, bat.

The crayfish as a type of the arthropods. Comparison of the external form of the crayfish with that of an insect (*e.g.,* grasshopper, cricket, cockroach), also with that of a millipede and a spider. Insects injurious to vegetation; the methods of combating their attacks.

Unsegmented and segmented worms (*e.g.,* a planaria and an earth worm).

Fresh-water mussel and snail.

A fresh-water unicellular animal, such as an amœba or paramœcium.

The natural habits of the various animals studied in relation to their structure.

A general view of classification based upon comparisons of the types studied.

NOTE.—Models are desirable for demonstration purposes.

Botany.—The practical study of representatives of the flowering plants of the locality in which the school is situated, and representatives of the chief subdivisions of cryptogams, such as a fern, a lycopod, a horsetail, a liver-wort, a moss, a lichen, a mushroom, a chara, and a spirogyra—with a general view of classification. An elementary knowledge of the microscopic structure of the bean and the maize or other types of the dicotyledons and monocotyledons. Drawings and descriptions of parts of plants, and classification. Comparison of different organs; morphology of root, stem, leaves, hair, parts of the flower; reproduction of flowering plants, pollination, fertilization and the nature of fruits and seeds.

Laboratory course in plant physiology, with studies of protoplasm, osmosis, absorption of food material; culture fluids, transpiration, digestion, respiration, growth, and movement. Common economic fungi (a collection to be made) with further study of fungous diseases.

GENERAL AND SPECIAL COMMERCIAL COURSES

38.—(1) When not already prescribed, one or more of Book-keeping and Business Papers, Writing, Shorthand, and Typewriting may be taken as part of one of the courses provided for under Reg. 34 (2). A Commercial Course, however, consists of subjects which are especially suitable as a preparation for business life; and all or most of them must be taught apart from the subjects of the other courses, either in the same or in a different school. Such courses, also whether of one or more years, are, by *The Industrial Education Act*, now under the control of the Advisory Commercial Committee, which has power, subject to the approval of the Minister and the Board, to prescribe the courses for its own school and to provide for examinations and diplomas. As a basis for organizing suitable courses, suggestive General and Special Commercial Courses are given below. These the Advisory Commercial Committee may modify to suit local conditions.

(2) For admission to any of the Commercial Courses, pupils must have been duly admitted by a High School Entrance Board.

(3) The Regulations relating to Religious Instruction, Morals and Manners, and Physical Culture, apply also to the Commercial Courses.

(4) In schools where the four years' course cannot be taken up, the work of the first year might be taken by all pupils, and that of the second and third years modified to meet local conditions; and in all schools pupils preparing for office work alone might take one of the special courses in Book-keeping or Shorthand.

(5) *When practicable, an arrangement should be made with business houses for actual practice in business offices by the pupils during part of the Summer holidays. Boards might make such practice a condition of obtaining the Senior Commercial Diploma.*

I. General Commercial Course

First Year

English Literature: The course of the Lower School.

Reading: The course of the Lower School

Grammar and Composition: The formal grammar needed as a basis for a course in practical English.

Oral and Written Composition: Elements of Narration, Description, Exposition, and Argumentation. The systematic and careful application of the principles of good English to the correction of mistakes made by the pupils in speaking and writing. Class debates.

Letter Writing: The arrangement, punctuation, and form of letters of introduction, application, and invitation; advertisements, notices, orders.

Spelling: Words in common use, commercial terms, common geographical names; names of noted persons.

History: The leading events of British and Canadian history (the Public School Histories). The influence of geographical conditions upon political, commercial, and industrial development.

Geography: The principles and conditions underlying Commercial Geography: Soil and climate and their effect on production; seas, mountains and rivers and their effect on production, communication, transportation; the distribution of population; agricultural, manufacturing and commercial countries. The application of the principles to the continent of North America.

ARITHMETIC: Review of elementary work. Decimals, percentage and its application to loss and gain, trade discount, commission, stocks, insurance, taxes, duties, interest, and discount. Elementary mensuration.

RAPID CALCULATION: A systematic drill on number combinations, with some attention to short cuts and approximate methods.

ALGEBRA: The course of the Lower School.

SHORTHAND: A course in Isaac Pitman's shorthand.

WRITING: Special attention to position and movement. The formation of a graceful business hand. Five periods a week.

BOOKKEEPING AND BUSINESS PAPERS: Simple business forms; receipts, promissory notes, drafts, orders, deposit slips, cheques, bank drafts, bills of goods, invoices, accounts, endorsement and consequent liability.

Double and Single Entry, involving the use of Journal, Cash Book, Invoice Book, Sales Book, Bill Book, Ledger. Financial statements, closing the ledger, changing from Single to Double Entry.

OPTIONS.—Any one of the following:

(1) Drawing: The course of the Lower School.
(2) French or German: Studied with a view to use in reading and in speech.
(3) Science: Elementary work in Botany and Physics, as a basis for the study of commerce.

Second Year

ENGLISH LITERATURE: The course of the Lower School, continued. Reading to be taken with Literature.

COMPOSITION: The course of the First Year continued.

HISTORY: Outline of British and Canadian history, with special attention to the period from 1688 to the present. The elements of the civil government of Britain and Canada, and the duties of citizenship.

GEOGRAPHY: A study of the principal materials of commerce, including the raw materials, processes of preparation or manufacture, and the products. The list should include food stuffs, textile fabrics, building material, and material for use in the arts.

NOTE.—For the proper development of this course a museum of commercial products and lantern slides or mounted photographs for purposes of further illustration are very desirable.

ARITHMETIC: The course of the First Year reviewed and extended. Trade discounts, banking operations, analysis of trading and profit and loss accounts, simple partnership problems, compound interest.

SHORTHAND: Speed of 80-100 words a minute.

TYPEWRITING: The touch method; letter writing; addressing envelopes, postcards, and wrappers; legal forms. Speed of 30 words a minute. Transcription of shorthand on the typewriter of 12-15 words a minute.

WRITING: The course of the First Year continued. Two periods a week.

BOOKKEEPING: Use of special columns in books of original entry. Partnership and the sharing of profits by different methods. Commission business. Banking transactions: Deposits, withdrawals, discounts, collections. Freight, duty, discount, and bad debts accounts. Division of merchandise and expense accounts into various subordinate accounts. Trading account, profit and loss account, and balance sheet, with percentage calculations.

Business Law: Contracts, negotiable paper, payments, partnership.

Options.—Any one of the following:

(1) Drawing: Mechanical Drawing.
(2) French or German: Course of First Year continued.
(3) Science: Elementary Chemistry, for later use in the study of material.

Third Year

English Literature: The course of the Middle School.

Composition: The course of the preceding year continued and extended with special attention to oral composition and class debates. This course should be systematically correlated with the work in History and Geography.

History: A general outline of commercial and industrial history, with special attention to the development of the last century.

Geography: Distribution of the commodities of commerce. Extractive and manufacturing industries. Markets. Means of communication and transportation.

Economics: A general outline, including the elements of production, land, labour, capital; organization for production, of labour, of capital; distribution of the product as wages, interest, profits, rent.

Arithmetic: The course of the previous year extended, compound interest, annuities, sinking funds, partial payments, averaging accounts, analysis of accounts and of financial statements. Foreign Exchange.

Bookkeeping and Accounting: Self-balancing ledgers, analysis sheets for expense, and for departments, company accounts, partnership adjustment, manufacturing accounts, cost accounting, goodwill, depreciation, reserve. Financial statements. Simple auditing.

Business Law: Review of previous year's work. Relation of buyer and seller, shipper and carrier, principal and agent, payments. Bills of Exchange Act. Partnership. Dominion Companies' Act. Ontario Companies' Act.

Options.—Any one of the following:

(1) Shorthand and typewriting.
(2) Drawing: Design.
(3) French and German, continued.
(4) Science: Chemistry, continued.

Fourth Year

English Literature: The course of the previous year extended.

Composition: The course of the previous year extended.

History: Some of the leading questions of the day treated historically. Discoveries and inventions. Strikes and Trade Unions. Tariffs and Commercial Treaties. Growth of the British Colonies.

Geography: The economic development of some of the leading industries of Canada treated geographically and historically. Wheat, iron and steel, fruit, dairy produce, etc.

Economics: Money and the mechanism of exchange. Value, price, supply and demand. Home, import, and export trade. The organization of the means of communication and transportation. Customs and foreign tariffs.

Arithmetic: The course of the previous year extended. The use of logarithms, and interest tables.

Bookkeeping and Accounting: Practical problems in accountancy, including the theory and practice of accounts, the analysis of accounts and of financial statements. Accounts of non-trading concerns. Revenue and Expense account. Methods of reducing labor in bookkeeping.

The purpose and method of the audit and the report upon the financial condition of the business.

Banking and Finance: The banking system of Canada, and the organization of the chartered banks. Comparison of the chartered banks with the National banks of the United States. The Bank of England. The Money Market.

Options.—Any one of the following:

(1) French or German.
(2) Drawing: Industrial design.
(3) Industrial chemistry.

Note.—In the foregoing course Algebra may be continued through the four years, if desired.

II. SPECIAL COMMERCIAL COURSES

Bookkeeping Course

First Year: The work of the First Year of the General Course.

Second Year: The work of the Second Year of the General Course.

Third Year: The literature, composition, economics, arithmetic, and business law of the Third Year of the General Course, together with—

(1) The same option continued.

(2) A review of the shorthand and typewriting of the Second Year of the General Course.

(3) The Bookkeeping of the Third Year of the General Course, but treated more fully and from the point of view of practice.

Shorthand Course

First Year: The work of the First Year of the General Course.

Second Year: The work of the Second Year of the General Course.

Third Year: The Literature, Composition, Economics, and Business Law of the Third Year of the General Course, together with—

(1) The same option continued.

(2) Review of the bookkeeping of the Second Year of the General Course.

(3) Shorthand: Speed of 125 words a minute, and transcription on the typewriter at 25 words a minute.

(4) Typewriting: Speed of forty words a minute, centring, tabular work, specifications, legal forms, copying processes, filing documents.

GRADUATION DIPLOMAS

39.—(1) High School Graduation Diplomas may be awarded to pupils whose conduct has been satisfactory, and who have completed the prescribed courses, as follows:

(*a*) A Junior Diploma, for a Middle School course or for a Commercial course of at least two years; and

(*b*) A Senior Diploma for an Upper School course or for a Commercial course of at least three years.

(2) Each graduation Diploma shall specify the course the candidate has taken.

(3) For the Commercial Diplomas, the examination shall be conducted by the staffs of the schools and any other examiners appointed by the Advisory Commercial Committee.

(4) For the other Diplomas, the Boards may hold their own examinations or may use the Departmental examinations.

(5) All Diplomas shall be signed by the Chairman of the Board of Trustees and the Principal of the School. On the report of the High School Inspectors, the Senior Diplomas may be signed also by the Minister, on application of the Boards concerned.

NOTE.—The forms for the Graduation Diplomas will be provided by the Minister.

INSPECTION

40.—(1) Every High School Inspector, while officially visiting a school shall have supreme authority in the school, and may direct teachers and pupils in regard to any or all of the exercises of the schoolroom. He shall make enquiry and examination, in such manner as he may think proper, into the qualifications and the efficiency of the staff, the adequacy and the suitability of accommodations and equipment of the school, and all matters affecting the progress and the health and comfort of the pupils. He shall report to the Minister of Education, with his recommendations, the result of his enquiry and examination, within ten days after the close thereof, and shall also from time to time report any violation of the Schools Act, or the Regulations of the Department of Education in the case of the schools for which he is inspector.

(2) The following schedule prescribes the number of days to be devoted, as far as practicable, by the Inspector to each class of school:

No. of Teachers.	No. of Days.	No. of Teachers.	No. of Days
2	1	7–8	3½
3	1½	9–12	4
4	2	12–15	5
5–6	3		

For a staff of over 15 teachers the number of days shall be at least five and so much more time as shall enable him to report fully upon the condition of the school.

EXTRACTS FROM THE DEPARTMENT OF EDUCATION AND THE HIGH SCHOOL ACTS

Sections 28 Department of Education Act, and 48, 49, 52 and 75, High School Act.

DUTIES OF TEACHERS

(1) No person shall be appointed principal of a high school unless he is a graduate in Arts of a University within the British Dominions, and furnishes satisfactory evidence to the Minister of his knowledge of the science and art of teaching, and of school organization and management.

(2) No person shall be appointed assistant teacher in a high school who does not possess the qualifications prescribed by the Regulations.

(3) Every teacher of a high school shall, in the organization, discipline, management, and classification of the pupils be subject to the Regulations.

SCHOOL YEAR

(1) The school year shall consist of three terms: the first shall begin on the first Tuesday of September and end on the 22nd of December; the second shall begin on the 3rd of January and end on the Thursday before Easter Day; and the third shall begin on the second Monday after Easter Day, and end on the 29th of June.

(2) Every Saturday, every public holiday and every day proclaimed a holiday by the council of the municipality in which the school is situate shall be a school holiday.

AUTHORIZED BOOKS

(1) A teacher shall not use or permit to be used as a text-book in a high school any book except such as is authorized by the Regulations, and the Minister, upon the report of the inspector, may withhold the whole or any part of the legislative grant in respect to any high school in which any unauthorized book is so used.

(2) Subject to the Regulations, an authorized textbook in actual use in a high school may, with the written approval of the board, be changed by the teacher for any other authorized text-book on the same subject.

(3) If a teacher negligently or wilfully permits an unauthorized book to be used as a text-book by the pupils of his school, the Minister on the report of the inspector may suspend such teacher, and the board may also deduct from his salary a sum equal to so much of the legislative grant as has been withheld on account of such use or any less sum at its discretion.

(4) A teacher, trustee, inspector, or other person officially connected with the Department, or with any normal, model, public, or high school or collegiate institute, or other institution which is under the management or control of the Department, shall not sell or become or act as agent for any person to sell or to promote in any way the sale of any school library, prize or text-book, map, chart, school apparatus, furniture, stationery, or other article for the use of any normal, model, public, or high school, collegiate institute or other institution aforesaid or for the use of any pupil thereof, nor shall he receive, directly or indirectly, compensation or other remuneration or the equivalent for so doing.

(5) For any contravention of subsection 1 a teacher shall incur a penalty of $50; a trustee shall incur a penalty of $100; an inspector shall incur a penalty of $500; and any other person so officially connected shall incur a penalty of $100.

N.B.—*A trustee, teacher, inspector, or officer of the Department of Education who is concerned or interested in the sale of books or supplies, and anyone employing or paying him to act as agent or otherwise, is liable to the penalties imposed by The Department of Education Act.*

AGREEMENTS

(1) A teacher who enters into an agreement with a board for one year and who serves under such agreement for three months or over, shall be entitled to be paid his salary in the proportion which the number of days during which he has taught bears to the whole number of teaching days in the year.

(2) A teacher shall be entitled to his salary, notwithstanding his absence from duty on account of sickness for a period not exceeding four weeks in any one year of his employment, if the sickness is certified to by a physician; or in a case of acute inflammatory condition of the teeth or gums, by a licentiate of dental surgery, but the period of four weeks may in any case of sickness be allowed, and extended, at the pleasure of the Board without a certificate.

(3) A high school inspector may, on the complaint of a board, suspend the certificate of a teacher who wilfully neglects or refuses to carry out his agreement with the board, but the teacher may appeal to the Minister, who may make such order with regard to the suspension as he may deem proper.

(4) All matters of difference between boards and teachers in regard to salary or other remuneration, whatever may be the amount in dispute, shall be determined in the Division Court of the division in which the cause of action arose; subject to the same right of appeal as under *The Public Schools Act.*

Appendix A

LOWER SCHOOL COURSES IN ELEMENTARY SCIENCE AND AGRICULTURE

ZOOLOGY.

General Scope of the Work: In this course in elementary Zoology the two sides of animal study are distinguished and outlined. On the one hand, is prescribed a general laboratory course which embodies the simple morphological study of common forms, representing the chief animal types. On the other hand, an outline of work on the natural history side of the subject is suggested. These are not two distinct courses. It is intended that the work of the laboratory shall be such as to help in the interpretation of the outdoor observations and incite to deeper enquiry; while the studies in natural history will make the indoor study interesting and necessary. The work in natural history will be a logical and safe foundation for the work in science taught through modern laboratory methods.

Outdoor Work: The teacher's immediate responsibility lies in the laboratory work. Outdoor work, which will of necessity vary with the locality, must be carried on to a very large extent without his direct supervision. But the teacher should encourage and direct the pupils, devoting a fair portion of the time of the class to discussions and reports on their independent work. Arrangements should be made for field excursions on suitable occasions.

A separate record of outdoor observations shall be kept by the pupils.

Indoor Study of Living Animals: The morphological studies in the laboratory are, wherever possible, to be supplemented or preceded by observation on living specimens. For this purpose, provision will be needed for suitable aquaria and vivaria, where the moving, breathing, and feeding of the living animals may be within ready view of the pupils. Moreover, *these morphological studies are not to end in the study of form; behind the observation of the form, there must be a constant effort to interpret the* MEANING *of the form, to show the relation of form and function.*

School Museum: For progress in the natural history side of the subject collections of specimens of the local fauna will have to be made. The school museum should be a thing of gradual growth, and great care should be taken in the selection of the material. As occasion offers, it should be provided with specimens of local fish, frogs, reptiles, birds, insects, etc.

Agriculture: In order to provide for pupils whose future interests may be identified with some form of rural activities, suitable options have been provided below under the heading, Work in Agriculture. For assistance in introducing or carrying on this work, teachers should apply to the *Director of Elementary Agricultural Education,* Ontario Agricultural College, Guelph, who will supply material for demonstration and experimental plots, as well as instruction sheets.

Options.—Throughout the courses pupils may choose between the Outdoor Work in Science and the Work in Agriculture. Once made, the choice must be maintained throughout the course.

FIRST YEAR—SEPTEMBER AND OCTOBER

Laboratory Work

INVERTEBRATES.—Class study of a grasshopper, a spider, a centipede.

1. Comparison of a grasshopper with a cricket or cockroach, leading to the recognition of the order Orthoptera.

2. Study of one of the following representatives of the other orders: a butterfly, a bee, a potato-beetle, a house-fly, a dragon-fly.

VERTEBRATES.—*Birds*: Study of the external characteristics of a domestic fowl, pigeon or other common bird; instruction regarding the protection of birds by law. Comparison of the bills, wings, legs, and feet of different types of birds. Chief skeletal characteristics of birds. Structure of feathers.

Outdoor Work

Observation of the habits and development of the insects studied in the laboratory; preparation of a small collection of insects; how insects visit and use flowers; how spiders weave their webs and secure their food; collection of caterpillars for observation of their metamorphosis during the following winter and spring.

Recognition of the common wild birds of the locality; observation of their habits and of their adaptation to their different modes of living; times and modes of their southward migrations; recognition of the different varieties of pigeons, ducks, geese and chickens that may be seen in the neighbourhood or at fall fairs.—*For the Winter*: Observation of the winter birds, their feeding habits, their dangers, their modes of protection.

Work in Agriculture

POULTRY.—Characteristics of different breeds of domesticated fowl; best methods of housing, feeding, managing, fattening, dressing, and marketing fowl; preserving eggs.

BEES.—Origin of breeds, management, habits, and value to fruit growers.

APRIL, MAY, AND JUNE

Laboratory Work

INVERTEBRATES.—Class study of the mosquito, the fresh water clam and the earthworm.

VERTEBRATES.—*Fishes*: Study of the external characteristics of a common fish. Chief skeletal characteristics. Structure of gills and the manner of breathing.

AMPHIBIANS: Study of the external characters of a common frog; of its development from the egg. Economic importance of frogs and toads.

Outdoor Work

Observations on the life histories and habits of economic insects, such as those suggested for study in the next term; collections of these insects; observations on the prevalence of mosquito larvæ in wet places and their destruction by kerosene: observations of the means employed by gardeners and others for combating insect pests; examination of spraying appliances; observations on bee-keeping and the production of honey.

Observation of the habits of earthworms, such as their appearance after rain, their castings on the garden paths, their depth in the ground in dry weather, their injury to lawns, their destruction by robins.

Recognition of the common fish of the district and observation of their habits; observation of the food fish sold in the local market; methods of rearing fish in government fish hatcheries.

Recognition of the common frogs, tree frogs, toads, and salamanders; observations of their habits and calls.

Observations of spring migrations of birds, and the feeding and nesting habits of summer residents; recognition of bird songs.

SECOND YEAR—SEPTEMBER AND OCTOBER

Laboratory Work

INVERTEBRATES.—Class study of examples of such beneficial and injurious insects as may have local interest in affecting field crops, gardens, orchards, forests, cattle, or the household.

VERTEBRATES.—*Mammals*: Study of the external characteristics of a cat, dog, or rabbit; comparison of the hair, teeth, feet, and locomotion of some typical mammals; chief skeletal characteristics of a mammal, such as the cat, including recognition and relationship of the larger bones.

Outdoor Work

Observation of the conspicuous insect pests of the season, the methods of attack, the injury done by them, the effect of spraying or other treatment; collection of economic insects.

Recognition of habits of our wild and domestic mammals; economic uses of domesticated mammals; recognition of the different breeds of farm animals, horses, cows, sheep, swine; comparison of the different breeds of dogs, cats, rabbits; preparation for winter and winter habits of wild animals found in the district; uses and values of skins and furs.

Work in Agriculture

LIVE STOCK.—Characteristics of different breeds of farm animals, their origin, uses, care, feeding, and breeding; judging and marketing.

INSECTS.—Special study of economic insects; spraying mixtures, and spraying machines.

APRIL, MAY, AND JUNE

Laboratory Work

INVERTEBRATES.—Class study of a crayfish and a wood louse (*Oniscus*).

VERTEBRATES.—*Reptiles*: Study of the external characteristics of a snake and a turtle.

REVIEW.—General view and comparison of the characteristics of the larger groups of animals taken up in the course, summarizing and classifying.

Outdoor Work

Continuation of the observation of the life and habits of birds and other animals studied previously.

Recognition of the common snakes and turtles of the locality and observation of their habits; how they pass the winter; how the young are hatched.

BOTANY

Remarks similar to those introducing the course in zoology will apply also to the work in botany. In particular it is urged upon the instructor that he should constantly stimulate the effort to interpret the meaning of the forms under observation—to discover where possible the relation between form and function.

FIRST YEAR—SEPTEMBER AND OCTOBER

Laboratory Work

The Plant as a whole: A detailed study of some common plant, such as a petunia or a buttercup, taking up the structure and functions of all the parts in succession; root, stem, foliage-leaves, flower leaves, fruit, and seed; the study at this stage to be such as can be carried on with the aid of an ordinary lens.

Fruits: Structure and classification of the simpler fruits, such as pea or bean, shepherd's purse, poppy, apple, tomato, grape, plum, maize or wheat, maple, etc. Adaptations for dispersal of seeds.

Seeds: Practical study of some common seeds, such as pea, bean, morning-glory, representing dicotyledons; maize, wheat, onion, representing monocotyledons; pine or spruce, representing gymnosperms; form, markings, parts and their functions, position of stored food.

Preparation for Winter: Annuals (including winter annuals, such as winter wheat), biennials, perennials; storage of reserve food in root, stem, leaf and seed; study of winter buds, their arrangement, structure, and means of protection; the fall of fruit and leaf; interpretation of marks on trees and shrubs.

Outdoor Work

Recognition of common annuals, winter annuals, biennials and perennials of the garden and the field; observation of winter beds, of change in colour, and of time of falling of leaves of trees and shrubs; study of marks on trees and shrubs; collections of common flowering plants (including weeds), and weed seeds to be begun.

Work in Agriculture

Recognition and comparisons of the cereals and legumes commonly grown in the locality; methods of fall cultivation in garden, orchard and farm; observation of rotations practised in the neighborhood by successful farmers; discussion, etc., on articles in the agricultural papers and Government bulletins.

APRIL, MAY, AND JUNE

Laboratory Work

Germination of Seeds: Simple experiments to illustrate the more important phenomena and requirements of germination and growth, *e.g.*, need of air, warmth, and moisture; evolution of carbon dioxide; how and to what extent water is absorbed; germinating power.

Artificial Plant Propagation: Cuttings, layering, budding, grafting.

Study of Spring Flowers: Plant-description and identification by means of a flora; relation of flower-structure to mode of pollination; meaning and significance of cross-pollination.

Roots: Varieties of root-forms; root-hairs; root-cap; region of growth.

Stems: Expanding of winter buds; varieties of stem-forms: erect, prostrate, climbing, twining, subterranean, aquatic; adaptation of form to habit. Spines, prickles, tendrils: their forms and uses. Stem-structure in dicotyledons and monocotyledons.

Foliage-Leaves: General structure, including epidermis, stomata, chlorophyll, veins. Protective structures, such as hairs, waxy coatings, etc. Form and arrangement of leaves in relation to sunlight and shedding of rain. Sleep-movements.

NOTE.—The preceding work on roots, stems, and leaves may be taken up incidentally in connection with the study of spring flowers. In any case, the pupil's records must show that all the topics have been taken up.

Outdoor Work

Observation and recording of the time of leafing and of flowering of common wild and cultivated plants. Habitats of spring-flowering plants; conditions governing growth; insect visitors; methods of pollination. Observation of opening and closing of flowers as shown by dandelion, tulip, hepatica, etc. Time of sowing and rate of germination of garden and farm seeds. Mode of climbing of such plants as sweet pea, morning-glory, grape. Boston ivy, Virginia creeper, hop, galium, clematis, etc. Leaf-arrangement to secure best exposure to light and to shed rain. Diurnal and nocturnal positions of leaves, such as those of clover, honey-locust, oxalis (so-called shamrock), etc. Collections begun in the autumn to be continued.

Work in Agriculture

Work in experimental and demonstration plots to furnish material for observation and class study; as, for example, a wild flower garden, a plot for climbing plants, a plot for propagation of currants, seedling apples, etc.; study of the best methods of preparing the ground, planting the seed, and caring for garden vegetables and flowers.

SECOND YEAR—SEPTEMBER AND OCTOBER

Laboratory Work

Composites: Study of typical composites, such as dandelion, burdock, and ox-eye daisy.

Weeds: Identification of common forms; their seeds; how they spread; and how they may be controlled.

Fungi: Recognition and mode of life of mushroom, puff-ball, polypore, as saprophytic forms; and apple scab, lilac mildew, wheat rust, black knot, or other common type, as a parasitic form.

Physiological Experiments: *Roots*. Simple experiments to illustrate root-functions, *e.g.*, absorption by osmosis, growth towards moisture. *Soils*. Soluble and insoluble materials in soils, and importance of each to the plant; simple experiments in illustration. *Stems*. Simple experiments to illustrate stem-functions, *e.g.*, conduction of cell-sap, heliotropism, rotation of the end of the stem in twiners and climbers. *Foliage-leaves*. Simple experiments to illustrate leaf-functions, *e.g.*, transpiration, manufacture of starch in sunlight, disappearance of starch in darkness, exhalation of a gas by green water-plants in sunlight, exhalation of carbon dioxide.

Outdoor Work

Recognition and collection of autumn-flowering plants. Collection and recognition of weed seeds in grain screenings. Observation of injurious effects of parasitic fungi, as seen in the rotting, etc., of fruits, such as apples, grapes, plums, etc.

Work in Agriculture

Special study of weeds, weed seeds, and plant diseases; systematic studies of varieties of apples, grapes, etc. best suited to locality; best methods of handling, storing, shipping, and marketing fruit; discussions, etc., on articles in agricultural papers and Government bulletins.

April, May, and June

Laboratory Work

Trees: Common orchard and forest trees: Modes of branching; identification by leaves, bark, wood; uses. Special study of the conifers: the bud, leaf, and flower.

Flower Study Continued: Identification of cultivated and wild spring flowers. Study of a common grass, such as orchard-grass, Indian corn, or wheat.

Ferns: General structure and habits of a common fern.

Economic Products: Summary of economic uses of plants: for timber, food, clothing, decoration, medicine, etc.

Review: General view and comparison of the characteristics of the larger groups of plants taken up in the course, summarizing and classifying.

Outdoor Work

Observations on plant-societies: plants of the forest, the meadow, the roadside, the pond, the marsh, the garden (weeds), the rocks, noting adaptations to environment. Observation of nodules on the roots of leguminous plants, and enrichment of the soil thereby. Observations of imported and domestic economic plant-products in market, store, and factory.

Collections to be continued.

Work in Agriculture

Work in plots for growing tree seedlings at the school; and in plots for representing economic plants in botanical families or groups, as wheats, grasses, corns, legumes, vegetables of the cress family, etc.; work in experimental plots for testing value of inoculating seed of legumes, different fertilizers or different methods of cultivation, etc.; observation of fields entered in the local Agricultural Society's Field Crop Competitions; work and methods of the Dominion Seed Growers' Association.

PHYSICS

First Year—November to April

Introductory: Measurement in Metrical and English units of length, area, volume, and mass; structure and use of the Balance.

The Three States of Matter: Defined and explained; Molecular Theory.

Mechanics: The principle of the mechanical powers; some of their more important simple applications.

Hydrostatics: Pascal's Law, statement and verification, some of its more important applications; pressure of liquids in its relation to direction, depth; density of liquid, area pressed, and the shape of containing vessel; Archimedes principle; specific gravity, common methods of finding specific gravities of solids and liquids.

Pneumatics: Study of the properties of a gas as exhibited in air as a type; proof that air has weight, occupies space, and exerts pressure; construction of the barometer; the relation between the volume and pressure of a gas; proof of Boyle's Law; practical applications of air pressure, air-pump, common pump, siphon, air-brakes, air-tools; meaning of wind pressure; some of the more important applications of wind pressure.

CHEMISTRY

Second Year—November to April

A study of air and its constituents; a study of water and its constituents; a study of limestone and its decomposition-products, quicklime and carbon dioxide. Mixture, chemical compound, element, physical and chemical change.

PHYSICS

Second Year—November to April

Heat: Nature and source of heat; experiments to illustrate the expansion of solids, liquids, and gases by heat; some practical applications of the principle of expansion; the anomalous expansion of water, its significance; meaning of temperature as compared with quantity of heat; explanation of the construction of the mercury thermometer, graduation of the thermometer in the centigrade and the Fahrenheit scales; meaning of latent heat, applications.

Sound: Nature and propagation of sound; pitch of sound; consonance and resonance; string musical instruments; wind musical instruments; reflection of sound, echoes.

Light: Nature and propagation of light; simple experiments illustrating the reflection and refraction of light; dispersion of light; colour of bodies.

Magnetism and Electricity: Magnets; laws of magnetic attraction and repulsion; polarity; magnetic induction; terrestrial magnetism; construction of simple voltaic cell; decomposition of water by electricity; electro-magnet; electric bell; heating and lighting effects of the current.

Note.—In both Physics and Chemistry, practice in the preparation and manipulation of apparatus should form part of the course. Where practicable, the course should also include simple operations in glass-blowing and lathe work, and in hard and soft soldering.

WORK IN AGRICULTURE

Measurements.—Exercises in the use of the common surveyor's chain and comparisons with metric measurements; determination of weights of measured bushel of common grains, and of cubic foot of water, milk, sand, gravel, or grains.

Soils.—Simple physical analysis of samples; comparative weights of different kinds of soil; estimation of water-holding capacity, of air content, of amount of humus; effect of frost, lime and humus on clay.

Milk and other Foods.—Estimate of fat in milk by means of Babcock test; use of lactometer in determining richness or presence of adulteration; simple analysis to show albumen, casein, and sugar; pasteurization; cream separator. Comparisons of flour for strength; estimate of moisture in vegetables.

Common Commodities of Farm and Household.—Practical acquaintance with Lime-Sulphur and Bordeaux Mixture, fertilizers, disinfectants, poisons, etc.

Appendix B

COURSES IN GEOMETRY

1. LOWER AND MIDDLE SCHOOLS

Following are the details of the course in Geometry prescribed for the Lower and Middle Schools of the High Schools. The first thirteen of the constructions and the first nineteen of the theorems are prescribed for candidates at the Model School and Senior High School Entrance Examination, in addition to the Practical Geometry of the Lower School.

A—Constructions

To construct a triangle with sides of given lengths.

To construct an angle equal to a given rectilineal angle.

To bisect a given angle.

To bisect a given straight line.

To draw a line perpendicular to a given line from a given point in it.

To draw a line perpendicular to a given line from a given point not in the line.

Locus of a point equidistant from two given lines.

Locus of a point equidistant from two given points.

To draw a line parallel to another, through a given point.

To divide a given line into any number of equal parts.

To describe a parallelogram equal to a given triangle, and having an angle equal to a given angle.

To describe a parallelogram equal to a given rectilineal figure, and having an angle equal to a given angle.

On a given straight line to describe a parallelogram equal to a given triangle, and having an angle equal to a given angle.

To find the centre of a given circle.

From a given point to draw a tangent to a given circle.

On a given straight line to construct a segment of a circle containing an angle equal to a given angle.

From a given circle to cut off a segment containing an angle equal to a given angle.

In a circle to inscribe a triangle equiangular to a given triangle.

To find locus of centres of circles touching two given lines.

To inscribe a circle in a given triangle.

To describe a circle touching three given straight lines.

To describe a circle about a given triangle.

About a given circle to describe a triangle equiangular to a given triangle.

To divide a given line similarly to another given divided line.

To find the fourth proportional to three given lines.

To describe a polygon similar to a given polygon, and with the corresponding sides in a given ratio.

To find the mean proportional between two given straight lines.

To construct a polygon similar to a given polygon, and such that their areas are in a given ratio.

To describe a polygon of given shape and size.

B—THEOREMS

The sum of the angles of any triangle is equal to two right angles.

The angles at the base of an isosceles triangle are equal, with converse.

If the three sides of one triangle be equal, respectively, to the three sides of another, the triangles are equal in all respects.

If two sides and the included angle of one triangle be equal to two sides and the included angle of another triangle, the triangles are equal in all respects.

If two angles and one side of a triangle be equal to two angles and the corresponding side of another, the triangles are equal in all respects.

If two sides and an angle opposite one of these sides be equal, respectively, in two triangles, the angles opposite the other pair of equal sides are either equal or supplemental.

The sum of the exterior angles of a polygon is four right angles.

The greater side of any triangle has the greater angle opposite it.

The greater angle of any triangle has the greater side opposite it.

If two sides of one triangle be equal respectively to two sides of another, that with the greater contained angle has the greater base, with converse.

If a transversal fall on two parallel lines, relations between angles formed, with converse.

Lines which join equal and parallel lines towards the same parts are themselves equal and parallel.

The opposite sides and angles of a parallelogram are equal and the diagonal bisects it.

Parallelograms on the same base, or on equal bases, and between the same parallels, are equal.

Triangles on the same base, or on equal bases, and between the same parallels are equal.

Triangles equal in area, and on the same base, are between the same parallels.

If a parallelogram and a triangle be on the same base, and between the same parallels, the parallelogram is double the triangle.

Expressions for area of a parallelogram, and area of a triangle.

The complements of the parallelograms about the diagonal of any parallelogram are equal.

The square on the hypotenuse of a right-angled triangle is equal to the sum of the squares on the sides.

If a straight line be divided into any two parts, the sum of the squares on the parts, together with twice the rectangle contained by the parts, is equal to the square on the whole line.

The square on a side of any triangle is equal to the sum of the squares on the two other sides + twice the rectangle contained by either of these sides and the projection of the other side on it.

If more than two equal straight lines can be drawn from the circumference of a circle to a point within it, that point is the centre.

The diameter is the greatest chord in a circle, and a chord nearer the centre is greater than one more remote. Also the greater chord is nearer the centre than the less.

The angle at the centre of a circle is double the angle at the circumference on the same arc.

The angles in the same segment of a circle are equal, with converse.

The opposite angles of a quadrilateral inscribed in a circle are together equal to two right angles, with converse.

The angle in a semicircle is a right angle; in a segment greater than a semicircle less than a right angle; in a segment less than a semicircle greater than a right angle.

A tangent is perpendicular to the radius to the point of contact; only one tangent can be drawn at a given point; the perpendicular to the tangent at the point of contact passes through the centre; the perpendicular from centre on tangent passes through the point of contact.

If two circles touch, the line joining the centres passes through the point of contact.

The angles which a chord drawn from the point of contact makes with the tangent, are equal to the angles in the alternate segments.

The rectangles under the segments of intersecting chords are equal.

If $OA. OB = OC^2$, OC is a tangent to the circle through A, B and C.

Triangles of the same altitude are as their bases.

A line parallel to the base of a triangle divides the sides proportionally, with converse.

If the vertical angle of a triangle be bisected, the bisector divides the base into segments that are as the sides, with converse.

The analogous proposition when the exterior angle at the vertex is bisected, with converse.

If two triangles are equiangular, the sides are proportional.

If the sides of two triangles are proportional, the triangles are equiangular.

If the sides of two triangles about equal angles are proportional, the triangles are equiangular.

If two triangles have an angle in each equal, and the sides about two other angles proportional, the remaining angles are equal or supplemental.

Similar triangles are as the squares on corresponding sides.

The perpendicular from the right angle of a right-angled triangle on the hypotenuse divides the triangle into two which are similar to the original triangle.

In equal circles angles, whether at the centres or circumferences, are proportional to the arcs on which they stand.

The areas of two similar polygons are as the squares on corresponding sides.

If three lines be proportional, the first is to the third as the figure of the first to the similar figure on the second.

Questions and easy deductions on the preceding constructions and theorems.

NOTE.—In the formal deductive geometry modifications of Euclid's treatment of the subject will be allowed, though not required, as follows:—

The employment of the "hypothetical construction."

The free employment of the method of superposition, including the rotation of figures about an axis, or about a point in a plane.

A modification of Euclid's parallel postulate.

A treatment of ratio and proportion restricted to the case in which the compared magnitudes are commensurable.

2. UPPER SCHOOL

Following are the details of the course in Geometry prescribed for the Upper School of the High Schools.

A

Exercises on the course prescribed for the Middle School, with special reference to the following topics—Loci; Maxima and Minima; The System of Inscribed, Escribed and Circumscribed Circles of a Triangle with metrical relations; Radical Axis.

B.—SYNTHETIC GEOMETRY

The following additional propositions in Synthetic Geometry, with exercises thereon:—

To divide a given straight line internally and externally in medial section.

To describe a square that shall be equal to a given rectilineal figure.

To describe an isosceles triangle having each of the angles at the base double of the third angle.

To inscribe a regular pentagon in a given circle.

The squares on two sides of a triangle are together equal to twice the square on half the third side and twice the square on the median to that side.

If A B C be a triangle, and A be joined to a point P of the base such that $BP : PC = m : n$, then $n\,AB^2 + m\,AC^2 = (m + n)\,AP^2 + n\,BP^2 + m\,PC^2$.

In a right-angled triangle the rectilineal figure described on the hypotenuse is equal to the sum of the similar and similarly described figures on the two other sides.

If the vertical angle of a triangle be bisected by a straight line which also cuts the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the segments of the base, together with the square on the straight line which bisects the angle.

If from the vertical angle of a triangle a straight line be drawn perpendicular to the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the perpendicular and the diameter of the circle described about the triangle.

The rectangle contained by the diagonals of a quadrilateral inscribed in a circle is equal to the sum of the two rectangles contained by its opposite sides.

Two similar polygons may be so placed that the lines joining corresponding points are concurrent.

If a straight line meet the sides B C, C A, A B, of a triangle A B C in D, E, F respectively, then $BD \cdot CE \cdot AF = DC \cdot EA \cdot FB$, and conversely. (Menelaus' Theorem.)

If straight lines through the angular points A, B, C of a triangle are concurrent, and intersect the opposite sides in D, E, F respectively, then $BD \cdot CE \cdot AF = DC \cdot EA \cdot FB$, and conversely. (Ceva's Theorem.)

If a point A lie on the polar of a point B with respect to a circle, then B lies on polar of A.

Any straight line which passes through a fixed point is cut harmonically by the point, any circle, and the polar of the point with respect to the circle.

In a complete quadrilateral each diagonal is divided harmonically by the other two diagonals, and the angular points through which it passes.

C.—ELEMENTARY ANALYTICAL GEOMETRY

Axes of co-ordinates. Position of a point in plane of reference.

Transformation of co-ordinates,—origin changed, or axes (rectangular) turned through a given angle.

$\pm 2A = x_1(y_2 - y_3) + \ldots. + \ldots.$

Co-ordinates of point dividing line joining $P_1\,(x_1,\ y_1)$ and $P_2\,(x_2,\ y_2)$ in ratio $m : n$ are

$$x = \frac{mx_2 + nx_1}{m + n}, \quad y = \frac{my_2 + ny_1}{m + n}.$$

$(P_1P_2)^2 = (x_1 - x_2)^2 + (y_1 - y_2)^2$

Equations of straight lines.

$$\left.\begin{array}{c} \frac{x-x_1}{x_1-x_2}=\frac{y-y_1}{y_1-y_2} \\ \frac{x}{a}+\frac{y}{b}=1 \end{array}\right\} \text{Line defined by two points through which it passes.}$$

$$\left.\begin{array}{r} \frac{x-a}{\cos\theta}=\frac{y-b}{\sin\theta}=r. \\ y=mx+b. \\ y=m(x-a). \\ x\cos a+y\sin a=p. \end{array}\right\} \text{Line defined by one point through which it passes, and by its direction.}$$

General equation of 1st degree, $Ax+By+C=0$, represents a straight line.

Any line through (x_1, y_1) is

$$A(x-x_1)+B(y-y_1)=0.$$

If θ be angle between $Ax+By+C=0$ and $A'x+B'y+C'=0$, then

$$\tan\theta=\frac{A'B-AB'}{AA'+BB'}.$$

Condition of ⊥rity $AA'+BB'=0$.

Condition of ∥ism, $\frac{A}{A'}=\frac{B}{B'}$.

Distance from (a, b) to $Ax+By+C=0$, in direction, whose direction cosines are (l, m), is

$$-\frac{Aa+Bb+C}{Al+Bm},$$

⊥r distance from (a, b) on $Ax+By+C=0$,

$$\pm\frac{Aa+Bb+C}{\sqrt{A^2+B^2}}.$$

THE CIRCLE—

Equations in forms:

$$x^2+y^2=r^2.$$

$$(x-a)^2+(y-b)^2=r^2.$$

$$y^2=2rx-x^2.$$

General equation $x^2+y^2+2Ax+2By+C=0$,

or $(x+A)^2+(y+B)^2=A^2+B^2-C$,

represents a circle with centre $(-A, -B)$ and radius $\sqrt{A^2+B^2-C}$.

Tangent at (x', y') to $x^2+y^2=r^2$ is $xx'+yy'=r$

Normal is $\frac{x}{x'}=\frac{y}{y'}$.

Tangent in form.

$$y=mx\pm r\sqrt{1+m^2}.$$

Pole being (x', y'), polar is $xx'+yy'=r^2$.

If pole move along a line, polar turns about pole of that line.

Square of tangent from

(x', y') to $x^2+y^2+2Ax+2By+C=0$.

is $x'^2+y'^2+2Ax'+2By'+C$.

Radical axis of

$$x^2+y^2+2Ax+2By+C=0,$$

$$x^2+y^2+2A'x+2B'y+C'=0.$$

Easy exercises on the preceding propositions.

Appendix C

ART MODELS

NOTE.—Adequate provision of type solids, models of common objects, ceramics, and plaster casts is indispensable.

1. *Type solids* made of wood and painted white, as follows: the probable price is placed after each item:

*Cube, 4 inches face, solid	$0 40
Cube, 4 inches face, incised faces	45
Cube, 4 inches face, quartered diagonally	50
*Sphere, 4 inches diameter, solid	50
Sphere, 4 inches diameter, halved and quartered	65
*Hemisphere, 4 inches diameter	45
*Cylinder, 4 x 8 inches solid	50
Cylinder, 4 x 8 inches, truncated	1 00
*Cone, 4 x 8 inches, solid	60
Cone, 4 x 8 inches, truncated	1 00
*Square Prism, 4 x 8 inches	50
Square Prism, 4 x 8 inches, divided diagonally	80
Square Plinth, 2 x 6 inches	40
*Oblong Block, 4 x 3 x 8 inches	45
*Square Pyramid, 4 x 8 inches	50
Square Pyramid, 4 x 8 inches, truncated	90
*Right-angled Triangular Prism, 4 x 5 ⅝ x 8 inches	50
*Equilateral Triangular Prism, 4 x 8 inches	50
Pentagonal Prism, 4 x 8 inches	50
Hexagonal Prism, 4 x 8 inches	65
Hexagonal Pyramid, 4 x 8 inches	65
Octagonal Prism, 4 x 8 inches	50
Circular Plinth, 2 x 6 inches	40
*Flight of Three Steps, 8 inches long, 2 inches tread, 1⅔ inches riser	65
*Cross, 2 x 6 inches	35
Chimney Model, 4 x 8 inches, divided and dowelled	80
Frame, 12 inches square, mortised	40
*Vase, 8 x 12 inches	2 25
*Ovoid, 4 x 6 inches	65
*Ellipsoid, 4 x 6 inches	65

NOTE.—The models marked with an asterisk are indispensable. Where the amount to be spent on Art models is $50, about $10 should be spent on type solids. Care should be taken not to over-emphasize their value in the course.

2. *Common objects* in wood, metal, or crockery; fruits, flowers, and vegetables in season (or models thereof in clay); mounted birds and other animals.

3. *Ceramics*; Pots, kettles, drinking-glasses, pitchers, cups, vases, candlesticks, jardinieres, etc.

NOTE.—The ceramics should be chosen, not only for their individual beauty, but for their form value in grouping and their colour value in a general scheme of colour harmony.

4. *Plaster casts;* Plaques, busts, figures, groups of figures, and historic ornament.

5. *Objects or parts of objects typical of local manufactures*: for example: Woodenware, parts of machines, samples of fabrics, wall paper, etc.

6. *Unique objects,* suitable for decorative purposes: Chinese lanterns and parasols, objects of Indian manufacture, ancient arms, etc.

NOTE 1.—Carbon reproductions, etchings, and engravings of famous buildings, landscapes, and figures should also be provided, to exemplify the laws of composition and to give the pupils some knowledge of the work of the great artists. These should be provided primarily as school decorations; they are not to be counted as Art Models.

In schools unable to purchase an adequate supply of the more expensive pictures, the Perry Pictures, very cheap reproductions (*The Perry Picture Co.*, Malden, Mass.), may be used to supplement. When, also, schools become acquainted with the masterpieces in this economical way, they will be better able to decide which of the more expensive reproductions to purchase.

NOTE 2.—Under tariff item 696 maps, photographic reproductions, casts, etchings, and lithographic prints or charts are specified as free, when specially imported in good faith by order of any College, Academy, School, or Seminary of learning in Canada, for use to demonstrate or to instruct students and not for sale.

Appendix D

MANUAL TRAINING

FIRST YEAR

Drawing.—Simple plans and elevations. Correct use of drawing board, tee square, triangles and compasses. Construction of the common geometrical figures. Simple lettering and figuring. Working drawings of objects made, either full size or to scale.

Wood Work.—Growth, structure, and identification of the woods used in the manufactures of the locality. Warping, twisting, checking; how caused and counteracted. Making of simple objects according to drawings previously prepared. Proper use of nails, screws, and glue. Use of simple joints in articles made; for example, end half lap, centre half lap, mitre, housing. Use and mechanical construction of common woodworking tools as exemplified in the making of a series of useful objects. Construction of simple school apparatus.

SECOND YEAR

Drawing.—Adjusting drawing instruments. Elementary orthographic and isometric projection. Simple sections. More advanced geometrical drawing. Freehand dimensioned sketches. Drawing of objects for woodturning, forging, or machine shop courses. Inking, tracing, lettering, and blue printing. Working drawings of objects made.

Wood Work.—Growth, structure, and identification of the woods used in the locality. Tool sharpening. Common joints used in various kinds of wood work —scarfing, simple dovetail, mortise and tenon, tongue and grooved joint—their use in making objects such as boxes, drawers, tables, book-cases, etc. Fastenings with dowels, pins, cleats, wedges, etc. Calculations from drawings of lumber required for articles made and cost. Every alternate piece of work must be kept for inspection.

Various methods of finishing, as staining, fuming, filling, shellacing, oiling.

Wood Turning.—Explanation of the lathe, its action, speed, parts, care, and use. The gouge, correct position, turning rough cylinder. The skew chisel; reason for grinding both sides and at an angle. Concave surfaces with skew chisel; review exercises. Irregular curves and spindle work. V grooves, beads and hollows. The introduction of hard wood and sandpaper; exercises in turning handles. Face plate turning, chuck work, boxes with covers, powder box, napkin ring, goblet, etc. Every piece of work must be kept for inspection.

Forging.—The forge, the fire, the heat, the height of anvil, and its position.

The ordinary tools, how to use and care for them. Hammer, sledge, chisel, fuller, and swage. Drawing, forming, upsetting, bending, and twisting iron, stamping and forge-blacking the finished piece, exercises of simple design and construction, gate hook, turning eye and hook. Scarfing, bending, and welding. Every piece of work must be kept for inspection.

Machine Shop Practice.—Simple ornamental work in brass, copper, and iron. The making of simple objects such as watch fobs, paper knives, blotter corner, trays, bowls, etc.

Simple chipping and filing. Use of measuring and marking tools.

An elementary study of the engine lathe: its parts, adjustment and working. Proper tool angles and cutting speeds and feeds. The exercises taken should, where possible, involve completed objects. All work must be kept for inspection.

NOTE.—A list of the articles made shall be submitted to the Inspector and the examiner, and the articles themselves, as far as storage facilities will permit, shall be preserved for their approval.

Appendix E

HOUSEHOLD SCIENCE

FIRST COURSE

Hand-Sewing: Review of Public School Course. Elementary stitches. Sewing on buttons, hooks, and tapes. Darning and mending. Hemming, running, basting. Making bags, aprons, potholders, towels, cuffs, etc.

Cookery.—Review of Public School Course. Methods of cooking, boiling, simmering, steeping, steaming, broiling, pan broiling, sauteing, frying, baking. Care of kitchen utensils, etc. Dishwashing. Sanitation and disposal of waste.

SECOND COURSE

Hand-Sewing.—Advanced stitches applied to small garments; hemmed patch, fine mending, making and working buttonholes. Instruction in the use of patterns. Making underwear.

Cookery, etc.—More advanced study of methods of cooking. Effects of heat upon common food materials. Care of the stove. Fuels: coal, wood, gas, electricity, kerosene, alcohol. Planning, cooking, and serving a meal. Composition of foods and functions in the body.

THIRD COURSE

Hand and Machine Sewing.—Taking measurements and drafting patterns. Cutting out and making simple garments. Threading, running, oiling, and cleaning of sewing machines. Use of attachments.

Cookery, etc.—Fruit preserving, canning, etc. Soft and hard water, soap, soda, etc., their effect upon various fabrics. Removal of stains. Preparation of food for invalids. Diet for infants and children. Furnishing, with consideration of cost, comfort, and good taste. Simple home nursing. Sanitation, disposal of waste, etc. Elementary laundry work.

NOTE.—The sewing machine course is optional.

ACADEMIC EXAMINATIONS FOR ENTRANCE INTO THE MODEL AND NORMAL SCHOOLS AND THE FACULTIES OF EDUCATION

FORMS OF APPLICATION.

1.—(1) Written examinations, as defined below, for entrance into the Normal Schools and the Faculties of Education, will be held by the Department of Education, at the close of each school year, subject to the conditions hereinafter contained, at each High School and Collegiate Institute, and at such other centres as may be approved by the Minister.

(2) Written examinations will also be held for entrance into the Model Schools at the close of the school year at such centres as the Minister may select.

NOTE.—The foregoing examinations will be completed by the 30th of June.

2.—(1) Candidates for one of the examinations provided for in 1 (1) above shall make application to the Public School Inspector before the 15th of May; and candidates for the examination provided for in 1 (2), above, before the 1st of May. All applications shall be made on the proper official form, which may be obtained from the Public School Inspector.

(2) The official form of application for admission to the examination for entrance into the Normal or Model Schools and the Faculties of Education shall include a certificate, signed by the Principal of the school in which the candidate has completed the course therefor, that he has read carefully during the preceding year, in addition to the works, if any, prescribed for the examination, at least four suitable works in English prose and poetry.

(3) The certificate shall also include a statement by the Principal that the candidate has taken up practically, as prescribed by the Regulations, the courses in Agriculture and the different departments of Science.

(4) Without this certificate or other similar evidence, satisfactory to the Public School Inspector, the candidate shall not be admitted to the examination.

EXAMINERS-IN-CHIEF

3. Except when necessary for special subjects the Examiners-in-chief for admission to the professional schools shall be selected as follows:

For the Model Schools, from the staffs of the Model Schools; for the Normal Schools, from the staffs of the Normal Schools; and, for the Faculties of Education, from the staffs of the said Faculties and of the Normal Schools; with, in the case of each Board, one or more of the Inspectors of Public, Separate, Continuation, and High Schools.

ASSOCIATE EXAMINERS

4.—(1) The Associate Examiners to read and value the answer-papers of candidates at the Upper School examination for entrance into the Faculties of Education and the Middle School examination for entrance into the Normal Schools shall be graduates of a British University or Specialists according to the regulations of the Department of Education, who are actually engaged in teaching, and who hold permanent High School certificates.

(2) The Associate Examiners to read the answer-papers of candidates for admission to the Model Schools and the Lower School examination for entrance into the Normal Schools and the Faculties of Education shall be holders of Permanent

First-Class or High School Assistants' certificates, who are actually engaged in teaching in High or Continuation Schools.

(3) No Associate Examiner for the above examinations will be appointed to read the answer-papers in a subject which he is not actually engaged in teaching.

SUBJECTS OF EXAMINATION

Examination for Entrance Into the Model Schools

5.—(1) The subjects of examination for entrance into the Model Schools shall be those of the Lower School of the High Schools, as follows:—

Oral Reading, Writing, Spelling, Book-keeping and Business Papers, Art, Elementary Science and Agriculture, English Literature, Geography, English Composition, English Grammar, History (British and Canadian), Arithmetic and Mensuration, and Algebra and Geometry.

(2) For Entrance into the English-French Model Schools, French Grammar and Composition shall be taken in addition.

Lower School Examination for Entrance Into the Normal Schools and Faculties of Education

6.—(1) In addition to the Middle or Upper School examinations prescribed below, candidates for entrance into a Normal School or a Faculty of Education shall pass one of the following examinations: (*a*) Senior High School Entrance examination, with the Elementary Science and Agriculture, and Book-keeping and Business Papers option; (*b*) the Model School Entrance examination; (*c*) the Senior Public School Diploma examination; (*d*) the Departmental examination in the following Lower School subjects:

Oral Reading, Writing, Spelling, Book-keeping and Business Papers, Art, Elementary Science and Agriculture, Geography, English Grammar, and Arithmetic and Mensuration.

(2) Candidates for entrance into a Normal School or a Faculty of Education, who take also at the Lower School examination the examination prescribed in the Lower School course in either Manual Training or Household Science, and who make at least 50 per cent. at the practical examination and in the examination papers, shall have the marks so obtained added as a bonus to the aggregate of their marks on the obligatory subjects.

Middle School Examination for Entrance into the Normal Schools

7.—(1) In addition to the examination in the Lower School subjects prescribed in 6 above, candidates for entrance into a Normal School shall pass the Departmental examination in the subjects of the Middle School of the High School, as follows:

English Composition, English Literature, British and Canadian History, Ancient History, Algebra, Geometry, Physics, and Chemistry.

(2) Candidates for entrance into a Normal School who take also at the examination the papers in the Middle School course either in Latin (the pass Matriculation course) or in Art, and who make at least 33 1-3 per cent. on each of such Latin or Art papers and 50 per cent. of the aggregate of the marks assigned to both papers, shall have the marks so obtained added as a bonus to the aggregate of their marks on the obligatory subjects.

UPPER SCHOOL EXAMINATIONS FOR ENTRANCE INTO THE FACULTIES OF EDUCATION

8. In addition to the examination in the Lower School subjects prescribed in 6 above, candidates for entrance into a Faculty of Education shall pass the Departmental examination in the subjects of the Upper School of the High Schools, as follows:

(1) (*a*) At one time or in two parts at different times, as follows:

Part I.—English Composition and Rhetoric, English Literature, Mediæval History, Algebra, Geometry, Trigonometry, and Physics.

Part II—Modern History, Biology, Latin, with Chemistry and Mineralogy, *or* French and German, *or* Greek and German, *or* Greek and French.

(*b*) Candidates who make the aggregate and fail in only one subject at the examination in either part may, at a subsequent examination, add that subject to the subjects of the other part.

(2) (*a*) In four parts, one or more parts at any time and in any order, as follows, provided always that the candidates take at least three of the four parts while actually engaged in teaching, and that they pass a practical examination in addition to the examination in the papers in Biology, Chemistry, and Mineralogy.

Part A.—English Composition and Rhetoric, Algebra, Geometry;
Part B—English Literature, Mediæval History, Trigonometry;
Part C.—Modern History, Latin, Physics;
Part D.—Biology, with Chemistry and Mineralogy, *or* French and German, *or* Greek and German, *or* Greek and French.

(*b*) Candidates who have failed in the aggregate only or in one subject only at an examination in one of the four parts, but who have made 40 per cent of the marks on each of two subjects and 60 per cent. of the total on said two subjects, may carry over to the examination in a part subsequently taken, the examination on the remaining subject.

(*c*) Candidates writing under the provisions of 8, 2 (*a*) above, who obtained Junior Teachers' standing not later than 1900, may substitute for the course now prescribed in Latin for entrance into the Faculties of Education the special courses in English Literature and the History of the English Language and Literature prescribed by the Department for those who qualify under this Regulation. For particulars of the courses, see Circular 58.

(3) Candidates for admission to a Faculty of Education who are also candidates for scholarships at the Honour Matriculation examination may substitute for one or more of the examination papers in the following subjects of the Faculty examination the corresponding examination papers in the subject or subjects of the scholarship examination:

Mathematics (Algebra, Geometry, and Trigonometry), English (Literature, and Composition and Rhetoric), Physics, Chemistry, Biology, Latin, Greek, French, and German.

NUMBER OF EXAMINATION PAPERS

9.—(1) One examination paper shall be set in each subject, except in the case of Upper School Greek, Latin, French, German, and Biology; Middle School Latin and Art; and French for entrance into the English-French Model Schools. In each of these subjects there shall be two papers.

CHARACTER OF EXAMINATION TESTS

10.—(1) Optional questions will be given at the Middle and Upper School examinations in History, and may be given in any other paper at the discretion of the Board of Examiners concerned.

(2) In English Composition an essay or a letter or both shall be required, to which special importance shall be attached. Questions in Rhetoric may also be set at the examination for entrance into the Faculties of Education; but no candidate shall be passed who does not satisfy the examiners in the essay or the letter, or in both, as the case may be.

(3) In addition to the examination on passages from the prescribed authors questions on sight passages shall also be set at the examinations in Greek, Latin, French, German, and English Literature of the Upper School, and Latin and English Literature of the Middle School.

(4) For admission to the Model Schools, the questions in English Literature shall be set on sight passages, and the candidate shall be required to have memorized a list of selections prescribed by the Minister.

(5) For admission to the Normal Schools and the Faculties of Education, candidates will be expected to have memorized the finest passages in the texts prescribed for the examination in English Literature.

(6) At the examination in Elementary Science and Agriculture a choice is allowed between the questions on the Outdoor Work in Science and the Physics of the second year and the questions on the work in Agriculture.

11.—(1) (*a*) The examinations in Oral Reading shall be conducted by an examiner appointed by the Minister, and shall include questions on the principles based upon the passages read. The maximum marks for the subject shall be 50.

(2) The Writing shall be judged from the answer papers in one of the other subjects, to be selected by the Minister when the answer papers are being examined. The maximum marks for the subject shall be 50.

(3) The examination in Manual Training will consist of (*a*) a paper in Drawing; and (*b*) an oral and practical examination in the other subjects of the course.

(4) The examination in Household Science shall consist of (*a*) a paper in the subjects of the course, and (*b*) an oral and practical examination in the same subjects.

EXAMINATION STANDARDS

12.—(1) Each examination paper shall be valued at 100 marks, except (*a*) the papers and (*b*) the oral and practical tests in the bonus subjects, which shall each be valued at 50.

(2) If, after all the answer papers have been read, any examination paper should be found by the Revising Committee of Examiners to be easier or more difficult than required, the minimum on the paper shall be correspondingly raised or lowered, and the total number of marks for the paper correspondingly increased or diminished.

(3) At all the examinations a report in a form prescribed by the Minister, and signed by all the members of the staff concerned, as to the standing of their candidates, will be taken into account in settling the results. Only the names of the candidates who, in the opinion of the staff, have completed satisfactorily the courses for the examination may be included in this report.

(4) For pass, candidates shall be required to make 60 per cent. of the aggregate marks of the papers in the subjects prescribed for the examinations, as well as 40 per cent. on each paper, or other examination test. For honours, seventy-five per cent. of the aggregate will be required.

(5) At the examination for admission to the English-French Model Schools, the standard for pass shall be 33⅓ per cent. of the marks assigned each paper, and 50 per cent. of the aggregate of marks.

(6) Candidates who make the required aggregate may be awarded a certificate, even though they should fail to obtain the minimum in a subject, provided they were reported by the staff as fit to pass in that subject, as shown from the report sent to the Department before the examinations.

13.—(1) Candidates who have failed at the Middle School examination, but have passed the Lower School examination for entrance into the Normal Schools may, on application to the Minister, be granted a Model School Entrance Certificate, provided they have obtained 50 per cent. of the aggregate of the marks for the Middle School examination, and 33⅓ per cent. of the marks for each paper therefor.

(2) Candidates who have failed at the Upper School examinations, but have passed the Lower School examination for entrance into the Faculties of Education, may on application to the Minister, be granted a Normal School Entrance Certificate, provided they have obtained 50 per cent. of the aggregate of the marks for each part and 33⅓ per cent. of the marks for each paper.

EXEMPTIONS FROM LOWER SCHOOL EXAMINATION

14.—(1) A candidate for entrance into the Normal Schools may omit the Lower School examination herein prescribed, provided that—

(*a*) He was duly admitted by the Principal to the Middle School not later than the 1st of September, 1911; and—

(*b*) Before the 1st of September, 1911, he was entitled, under the Approved School Scheme then in force, to a certificate exempting him from the September examination in the Lower School subjects.

(2) For other candidates for entrance into the Normal Schools who can qualify under (*a*), but not under (*b*), an examination in the Lower Schools subjects will be provided in September of 1912 and 1913, but such candidates may substitute one of the examinations prescribed in 6 above.

(3) A candidate for entrance into the Faculties of Education, who was duly admitted by the Principal to the Middle or Upper School not later than the 1st of September, 1911, may omit the Lower School examination herein prescribed.

Fees

15. The following are the fees for the Academic examinations:—

(1)	Entrance Examination into the Model Schools	$5 00
(2)	Lower School Entrance Examination into the Normal Schools and the Faculties of Education	3 00
(3)	Middle School Entrance Examination into the Normal Schools	5 00

(4) Upper School Entrance Examination into the Faculties of Education:—

(1) Parts I and II, taken together	$8 00
(2) Part I or II	5 00
(3) Part A, B, C, or D	3 00
(4) Three or more taken together	8 00

16. The prescribed fee shall be forwarded with the application to the Public School Inspector, who shall divide it as follows between the Department of Education and the Board of the School at which the examination is held:

Of a $3 fee—$2 to the Department and $1 to the Board;
Of a $5 fee—$3 to the Department and $2 to the Board;
Of an $8 fee—$5 to the Department and $3 to the Board.

APPEALS

17.—(1) The papers of all candidates, who, on the reading of the Associate Examiners, are found to have failed in any way by not more than a reasonable margin, shall be re-read by the Board of Examiners before the announcement of the results. Candidates who still fail on this second reading shall have their statements of marks stamped RE-READ, and in such cases no appeal will be allowed.

(2) Candidates who fail and whose papers have not already been re-read by the Board of Examiners may have their papers so re-read by making an appeal before September 1st and paying a fee of $2.00.

(3) Should illness, bereavement, or any other unavoidable cause interfere with a candidate's examination, such circumstances shall be duly considered by the Board of Examiners, but only when reported to the Department, with satisfactory documentary evidence, immediately at the close of the written examination.

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